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ORIGINAL ARTICLES.

TREATMENT OF MEMBRANOUS COLITIS.¹

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It is to be hoped that but few physicians will be called upon to treat a case of membranous colitis at the outset of their career, for if so they will be apt to think that they have made a serious mistake in the choice of their life-calling. The sanguine expectations with which they left college that success in practice is sure to follow good training and earnest endeavor are likely to be disappointed in every particular and in the most trying fashion whenever a patient comes with a story of a chronic habit of passing long shreds or membranous casts of the bowel.

The experienced clinician has learned to note early in eyes and forehead signs of head trouble, and about the nostrils and the upper lip signs of thoracic derangement, but when the corners of the mouth go down in woebegone expression he knows that inward grief reigns somewhere in the abdomen. But of all physiognomies a case of membranous colitis wears the most settled aspect of confirmed wretchedness, which the young physician, confident in his resources, meets with assurances of coming relief. But his subsequent experience is apt to be much as follows: For some days his remedies seem to be working well. Then the old pains in the bowels return, now with a sense of general distress pervading the abdominal cavity, best described by the colored woman's term, "misery." Then follows a more localized pain, either griping or cutting or sickening, which is explained as due to wind, for often various rumblings precede or accompany it. The abdominal parietes frequently become very tender to palpation in places, but no dependence can be placed upon such local signs, for, at the next visit they are somewhere else, although as bad as ever. Meanwhile the patient develops a decidedly varied train of nervous symptoms. The mind refuses to think or to do anything but feel conscious of distress. Unbearable headaches, neuralgias and pains here and there, palpitation, sinking spells and weepings make up the story, until, finally, the bowels with exhausting pains empty themselves of quantities of long strings or strands of mucous masses, mixed with the feces or following them, sometimes with a few streaks of blood and rarely with a small amount of pus. Then, for a while there is comparative quiet, but sooner or later, the old

story is repeated with every accompanying variety of dyspeptic symptoms, referred now to the stomach and now lower down, and each time explained by this or that offence in diet, by the late bad weather, or something of that character.

In no other complaint is the morbid self-consciousness characteristic of abdominal affections more marked. The patient can neither think nor talk about any other subject than his many woes. Therefore, by reason of the great frequency, as well as variety of the accompanying nervous symptoms, many writers have been led to regard the disease as primarily a neurosis, or, at least, to speak of a nervous colitis. I regard this view of its pathology as analogous to that of the philosopher who admired the wisdom of the Creator in causing large rivers to flow past large towns. A colon, the lining of which has fallen into the condition which such a secretion indicates, presents wide tracts of surface for the absorption of all kinds of excrementitious poisons into the blood. It is these poisons, which, circulating everywhere where there are nerves, produce all the symptoms referable both to the splanchnic and to the cerebrospinal tracts, which make up the multiform nervous features of the case, and offer a sufficient explanation of them without needing the intervention of any vague primary nervous lesion.

Moreover, while nervous lesions or irritations do sometimes produce trophic changes, nevertheless no instance can be cited of chronic fluxes from mucous membranes having any such origin. Chronic bronchorrhea and chronic gleet certainly are never primarily neuroses, although asthmatic spasm may complicate the one or an irritable stricture the other. The truth is that, while in membranous colitis the patient may be reduced to a state of pitiable emotional weakness, the objection to the view that this indicates a nervous etiology is that it leads us in a wholly wrong direction when the subject of treatment comes into consideration. How independent of any antecedents of a neurotic kind this affection may be is illustrated by the following case:

Dr. H. A., a middle-aged physician in active practice, had always enjoyed excellent health until he accepted a staff appointment in the volunteer service during the late Spanish War. While on cavalry duty at a camp in Virginia, which required his being for hours in the saddle, in July, 1898, he began to suffer from an intense irritation referred to the rectum. This measurably subsided for a time, but returned in November and steadily grew worse during the following winter. He then had his sphincter stretched

¹ Read before the Section on Medicine of the New York Academy of Medicine, February 26, 1900.

by a rectal specialist, but with no benefit. His symptoms were recurrent attacks of severe tenesmus which tormented him, especially at night, preventing sleep, and which were accompanied by discharges of large quantities of mucus. He lost forty pounds in weight and was obliged to give up practice. He came to me for treatment in May, 1899. Examination showed the rectal mucous membrane to be deeply congested, but there were no signs of ulceration. After six weeks of recourse to remedial measures, which will be mentioned later, he was relieved of his urgent symptoms, so that he regained his weight and was enabled to resume practice, but every now and then, he has had temporary relapses and has passed complete casts of the bowel of greater or less length. These in turn ceased, but in January, 1900, he reported another return of tenesmus and reappearance of the membranous casts. He has again improved, and I have hopes that like many other cases his relapses will grow fewer and at last cease altogether. But what I would note here is that, although he began to develop all the train of nervous symptoms above referred to, there can be no doubt that none of them had any primary relationship to his trouble, but were purely secondary. The beginning of the disease was clearly due to a local irritation excited by local causes, acting first on the lower end of the intestinal tract, and gradually extending upward. In like manner, one of the worst cases for nervous complications which I have met was in a young married woman who dated her disorder from prolonged riding in the country on a bicycle.

Now, what does pathological anatomy reveal as to the nature of this disease? Unfortunately, it must be admitted that autopsies show us more what this intestinal disorder is not, rather than what it is. Thus, with beginners, it is very natural to surmise that extensive tracts of ulceration will be found in the colon. But generally nothing of the kind is discovered, although the morbid process has continued severely for months and years until the patient succumbs to it. Instead the colon is found considerably dilated, its walls thin and atrophied, with here and there patches of simple congestion, toward the lower end clumps of small, thin veins, not collected into polypi nor resembling hemorrhoids, are found, and evidently these are the source of the bright red blood which is often mixed with the mucous discharges, but even they do not show that their coats have been opened by an ulcerative process. Microscopic examination of the discharged membranes themselves shows nothing but a structureless material which is albuminous in composition, but containing no fibrin even in the most consistent patches, and in typical samples wholly devoid of pus, or leucocytes, or of other ingredients of inflammatory exudates, the cells present evidently being the epithelial cells of the large intestine which have undergone fatty degeneration.

The clinical symptoms also are quite unlike

those of ulcerative colitis, for obstinate constipation, as a rule, both precedes and accompanies membranous colitis, while diarrhea as uniformly accompanies ulcerative colitis.

There are several forms of secondary membranous colitis, on the other hand, which have nothing in common, excepting the formation of membranous patches, with the disease which we are considering, either in their etiological or in their clinical characters. Thus, in some cases of chronic Bright's disease, the patients lie comatose for days and pass loose movements in bed. After death the colon, as well as parts of the small intestine, are found lined with thick, diphtheritic-looking patches, while, because such membranous exudations never appeared in the dejecta, their existence was demonstrated only on the post-mortem table. On the other hand, the presence of both albuminuria and of hematuria is not uncommon, as temporary symptoms in true membranous colitis. In two patients of mine I have noticed these signs of direct irritation of the kidney repeatedly, but I do not place much store upon them, for other signs of progressive renal disease have remained absent, although these patients have been under my continuous observation for several years. I ascribed these renal symptoms to the entrance of the bacillus coli into the blood through the diseased intestinal wall.

A case of true membranous colitis, such as we have been considering, has no real resemblance to a catarrhal colitis or to a catarrhal inflammation of any kind. What leads to a confusion between this especial affection and others, the seat of which is in the large intestine, is the presence, more or less common to them all, of colonic symptoms. Just as any form of arthritis, whether traumatic, rheumatic, gouty, gonorrheal, pyemic, etc., will cause very similar symptoms of pain on movement of the joints, with redness, swelling, etc., so that the most diverse varieties of arthritis can be confounded in diagnosis and even in nomenclature—witness that impossible hybrid, rheumatic gout—so every serious process in the colon will occasion abdominal distress, tenesmus, or "bearing down," or pain before and during defecation, etc., and it is only when we have set these colonic symptoms aside and direct our attention to the conditions which they present, as separately characteristic of each form, that it becomes plain that in true membranous colitis we have a specific affection of the large intestine, the pathology of which is undoubtedly distinct from all other colonic disorders, with, in all probability, as specific an etiology.

From the clinical side some of the etiological factors appear to be direct mechanical irritation of the rectum, as by horseback or bicycle-riding, as already mentioned in two of my cases. Similar to these are cases traceable to pressure on the rectum by uterine fibroids, and it is well to examine carefully in women for the presence of such possible causes. In my opinion, however, by far the commonest cause is the prolonged retention of hardened scybala. A history of pre-

ceding habitual constipation of years' standing is the rule in these patients, and, hence, the greater frequency of the complaint in women. It is striking to find, when we carefully investigate the antecedents of most of these female patients, how evidently they have been subject to fecal retention for months at a time, and there is nothing which favors the formation of stationary hard lumps of feces in the weakened and distensible colon as the habitual use of certain laxatives and cathartics. One of the largest masses of the kind which I have ever had to deal with proved on examination to consist mainly of fig-seeds. Once that this irritation awakens the morbid process in the colon, it seems to change the nutrition of the intestinal wall in its own special way, with a definite tendency for this initial local change to spread in the wall either upward or downward, according to its first seat and, finally, to induce a permanent perverted secretion, which becomes very difficult to alter or to cure.

As to treatment, the first indications are to relieve the colonic symptoms proper, as they may be termed, that is, symptoms which are more or less common to all diseases of the colon, as pain and stiffness of the joints on movement are common to all varieties of arthritis. Thus, nothing is so soothing to the tenesmus, the cutting and bearing-down pains, and the general abdominal distress, as free irrigation of the colon with normal saline solution, to which may be added oil of peppermint, five drops to the pint. Three to five gallons, at a temperature of 100° F., may be employed once in twelve hours, and given by Kemp's rectal irrigator, according to the printed directions which are furnished with this simple and serviceable instrument. The relief which this hot douche affords is often described by the patients as very great, and as enabling them to sleep at night better than any other measure. Care must be taken, however, that all the fluid is returned, lest any quantity retained may afterward provoke a return of pain, thus causing it to act as an enema. By a little practice, however, this may be avoided. Great quantities of mucus are thus dislodged and washed away, but it frequently happens that after the irrigation has been employed, the patient subsequently has a painless movement which consist of a large amount of simple mucus without shreds or membrane. Sometimes I have found benefit from using at the end of the irrigation a gallon of the water in which from 60 to 100 grains of resorcin has been dissolved, being careful that it is all expelled afterward. Once a week a pint of clean, hot water with 30 to 40 grains of silver nitrate may be used instead of the resorcin. Unfortunately, this irrigation is not curative, as it is in many cases of chronic catarrhal or chronic ulcerative colitis, for, although it serves the valuable service of eliminating the complication of direct colonic irritation which so often undermines the patient's health and, by so much, aggravates the local processes of the disease, yet it does not deal with the nutritive change itself in

the intestinal wall, but only with some of its effects. Nevertheless, it should not be omitted from the system of measures which should be adopted for the more or less prolonged methods of treatment needful in every essentially chronic disease.

The next question is, Have we any medicinal remedies which can be expected to be of service in changing the disordered nutrition of the intestinal mucous membrane? I believe that we have one such remedy and that is small, and, what I may call alterative, doses of castor oil. I have had patients report that the relief afforded by this medicine has been most unmistakable from its first administration. I prescribe it in an emulsion, of which each tablespoonful contains from one-half to one dram of the oil, preferably one-half at first, to be taken either half an hour before meals or an hour after meals. This should be continued for months together, and only intermitted when it seems unmistakably to increase the patient's dyspeptic symptoms.

The nitrate of silver in quarter-grain doses, combined in pill or capsule form with nine grains of turpentine resin, and taken three times a day, is sometimes of much service, although not as uniformly as in chronic catarrhal or ulcerative colitis, in which complaints a quarter of a grain of opium is added. To enable the turpentine to dissolve and not pass the bowels unchanged, it should be pulverized well with licorice powder and a drop or so of liquor potassæ added to each capsule. After the silver has been taken for six weeks, the sulphate of copper in quarter-grain doses can be substituted for it.

Meantime, membranous colitis is a complaint particularly characterized by general disturbance of the digestive functions of the whole elementary tract. This is a result and not, as many deem it, a cause of the colitis; but there can be no doubt that the consequent maldigestion and fermentation of the ingesta become of themselves a complication of the original complaint. The stomach is apt to be dilated and the small intestine the seat of disturbed innervation and a perverted secretion. Five grains of resorcin in solution with tincture nucis vomice, half an hour after meals, constitutes a good prescription for the gastric symptoms, to be supplemented by ten grains of sodium benzoate and ten grains of bismuth salicylate in capsules, an hour after each meal, as intestinal antiseptics. We should, however, from the first bear in mind the probable dependence of the disease itself on chronic constipation, and against this I would limit myself to the employment of salines exclusively. From one to two drams of phosphate of soda with ten grains of salicylate of soda should be given every morning in a tumblerful of water as hot as the patient can sip it. After a time, the same quantities of sulphate of magnesium may be substituted. Daily massage of the bowels, particularly of the tract of the colon, is also to be highly recommended. We need not fear arousing any inflammatory process by such manipulation, for we are not

dealing with inflammatory disease. Once in a while, however, we do find a region which always remains tender to palpation and in such cases a local blister often is beneficial.

The diet of such patients is important to consider, if only from the fact that many of them most unwarrantably reduce it from fear of this or that article disagreeing with them, according to their remembrance of some severe attack after they partook of it, until they finally live on only some very few and insufficient forms of food. We may simply exclude beans, corn, spinach, and the woody vegetables, along with oatmeal among the cereals, and then encourage the patients to eat meat, poultry, eggs, zoolak or kumyss, peptonized milk and most cereals, with instructions not to care what will happen. In some cases pancreatic emulsion is of marked service.

Finally, bodily movement and out-of-door exercise is beneficial on general principles. Repeatedly, we find a summer change to the country do more good than anything else, for fresh air is the best remedy for constipation that can be named, and its effect is not lost in disease.

Recent writers, notably Hale White, have recommended whenever everything else fails, to give the colon a prolonged rest by the establishment of an artificial anus in the right flank. Some recoveries have been reported from this procedure and I see no reason why in otherwise hopeless cases, it should not be tried.

THE SANITARIUM TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS AND ITS RESULTS.

By E. L. TRUDEAU, M. D., M.Sc.,
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MANY years ago circumstances placed me in a position where the problems connected with tuberculosis were of necessity daily before me and afforded ample opportunities for the study of the disease in its clinical, scientific, and humanitarian aspects. The long time required to obtain a cure, or even an arrest, of the disease by the climatic and open-air method, and the necessary expenses it entailed, when added to the loss of income incident to months of enforced idleness, seemed to put the practical application of this method of cure beyond the reach of the majority of individuals who have to earn their own living. An institution that would offer this opportunity and a return to a life of usefulness to working-men and women at a moderate cost seemed an urgent necessity, and induced me to attempt the establishment of such an institution and put the methods so long advocated by Brehmer to a practical test.

In view of the present widespread agitation on the subject of tuberculosis, I have thought at this time some of the experiences and results obtained during the past fifteen years while developing the first sanitarium in America for the

treatment of pulmonary tuberculosis in persons of moderate means might prove of interest.

In looking back it seems curious to note, while every new consumption cure advocated has at once been eagerly taken up and tested, how slowly the rational teachings of Brehmer in regard to the treatment of the disease came to be generally accepted even abroad, while in this country the value of his methods is only now beginning to be realized.

I will not weary you with a detailed description of the Adirondack Cottage Sanitarium, its history, its struggle for existence, or its growth and development, but will merely touch briefly on a few points which relate to the class of patients it tries to cure or relieve, call your attention to a few features of the treatment, and lay before you the results obtained during the past fifteen years. My acknowledgments for valuable assistance and support are due to the late Dr. Alfred L. Loomis, to Dr. E. G. Janeway, Dr. Walter B. James, Dr. H. P. Loomis, and Dr. E. R. Baldwin, who for many years have examined without remuneration applicants for admission to the institution.

The two requisites for admission are that the patient should be unable to pay the usual prices charged in the region, and that he should be in the incipient stages of the disease. Five dollars a week has been the uniform charge to all alike; no graded rates or private patients; no charge for medical attendance; the deficiency in the running expenses being made up each year by subscriptions. It is a pleasure to me to state that during the past fifteen years not only has money enough to meet this deficiency been always forthcoming, but that the growth and development of the institution has been rendered possible by what has been put aside each year over and above the amount necessary to meet the running expenses, the plant paid for and entirely free from debt, and that enough has been saved to accumulate a Free Bed Fund of \$18,000 and an Endowment Fund of \$150,000.

Experience has shown most forcibly that the success of institutional treatment depends on the early detection of the disease. It has been found that 68 per cent. of the truly incipient cases were discharged as apparently cured, while only 11 per cent. of the advanced and none of the far-advanced cases recovered. We must recognize more and more the evident limitations of physical examination alone, and the dictum so often assumed that the disease is not present if nothing can be detected by this method seems to me utterly untenable. The pretuberculous stage of tuberculosis, so much written about, is nothing more than the first stage of tuberculous infection before physical signs have appeared. In the first stages of miliary tuberculosis of the lungs there are no appreciable physical signs, and no physical examination can be expected to detect the onset of tuberculous infection in the glands or deep tissues and organs of the body.

In attempting to make an early diagnosis in

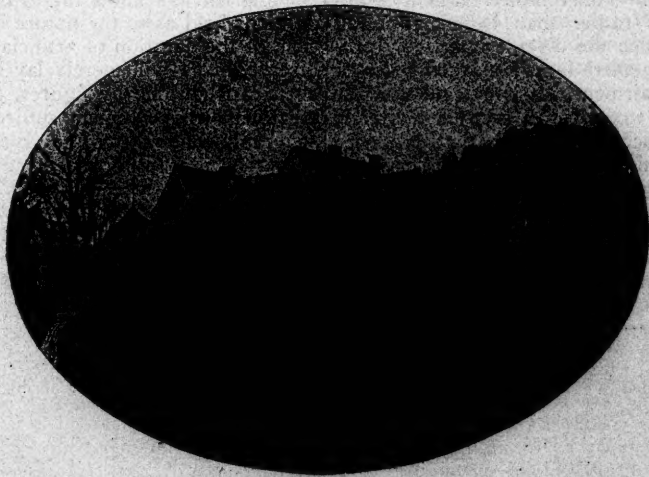
obscure cases, of late I have occasionally been assisted in reaching a conclusion by a careful X-ray examination, and, where it was necessary, by the tuberculin test. I have had on several occasions a practical demonstration that an examination with a good X-ray machine and the fluoroscope may in early cases be of service in affording additional evidence of the presence of the disease. The diaphragm is seen to be higher on the suspected side or its excursion diminished on one or both sides, and in many cases a slight shadow can also be detected at the site of the suspected lesion. Of course, this may occur as the result of any other pathological condition which tends to diminish the expansive action of the lungs and impair their transparency, such as areas of pneumonic infiltration, bronchitis, etc., but if the history and rational signs are carefully considered these may generally be excluded.

If additional and more conclusive evidence is

doubted skill had been negative; the X-ray picture was inconclusive; there was no cough or expectoration, the only symptoms present being some loss of weight and strength, and a temperature which occasionally touched 99.5° F. in the evening. The patient was a physician and insisted on a diagnosis, therefore I advised the tuberculin test. Two milligrams gave a typical reaction. He obtained a year's leave of absence and went West. A few months later he wrote me he had gained twenty pounds, and that no one believed he had ever had tuberculosis. Recently I received a letter from him stating that one morning, after some unusual physical exertion the previous day, he had spit a teaspoonful of blood, and that on being examined by a physician he had been told that there was a slight pleuritic friction-sound behind the right scapula.

The scope of this paper will not allow me to discuss the details of institutional treatment, of

FIG. 1.



The Main Hospital.

required, the tuberculin test should be applied. By a resort to this test a positive opinion one way or the other can often be reached, and if the initial dose does not exceed one milligram the constitutional disturbance caused by it is slight. No injury to the patient has in my experience ever resulted from such a test. During the past two years I have seen several cases in which a slight impairment of health, without cough, physical signs, or appreciable rise of temperature, being the only symptom present, a diagnosis of tuberculosis was made possible by a study of the fluoroscope picture, and, if this proved negative the application of the tuberculin test; the correctness of the diagnosis being confirmed later by the appearance of physical signs in the chest, of hemoptysis, or of cough, expectoration and bacilli. One case which I saw during the earlier part of last summer illustrates these points. Repeated physical examinations by experts of un-

which the main factors are an invigorating climate, an open-air life, rest, coupled with a careful regulation of the daily habits, an abundant supply of nutritious food, with the exhibition of such tonic and restorative measures as may be indicated in each case. I think, however, the favorable influence of rest on the course of a tuberculous process is not generally recognized. Surgery has taught us that activity of a part affected with tuberculosis always tends to aggravate the disease and to render it progressive. A tuberculous joint may often be cured by simple immobilization, while it will go on to destruction if the patient be allowed to use it at will. In advanced tuberculous ulceration of the larynx, where it becomes necessary to perform tracheotomy, the rest afforded to the parts by the operation is at once followed by a remarkable improvement in the disease in the larynx. Murphy's proposed treatment, which consists in putting the

diseased lung completely at rest by introducing nitrogen gas into the pleural cavity, is another proof of the recognition by the surgeon of the value of absolute rest.

Absolute rest, as long as it is taken in the open air, is the best measure at our command to reduce the pyrexia of tuberculosis, to conserve the patient's energies, to abort the activity of the process, and to encourage the formation of fibrous tissue about it. The objection that a patient cannot digest if he does not exercise does not seem generally to be supported by experience, as most of the patients, while living out of doors and kept absolutely at rest, eat and digest an amount of food that would suffice for laboring men.

Specific methods of treatment have been very little used at the Sanitarium with the exception of tuberculin,¹ which has been employed with the utmost care for the past eight years, in selected cases, in order that some evidence as to its healing or immunizing influence, when given under the most favorable conditions of environment, might be obtained. Tuberculin treatment is apparently injurious rather than beneficial in all those forms in which the disease is actively progressing, or where there is any marked fever or constitutional impairment. It is evident that the addition of more toxin to an organism already unable to cope successfully with that produced by the disease would not be likely to be beneficial. Such treatment would find a parallel case in an attempt to produce immunity by injecting more diphtheria toxin in the case of a child with diphtheria already overwhelmed by the poisonous substances elaborated by the germs.

The exhibition of tuberculin has been confined at the Sanitarium to apyretic cases, or those that were nearly so, if well nourished and with moderate lesions, the diagnosis of the disease being confirmed in every case by a microscopical examination of the expectoration. The treatment should be begun with a minimum dose, very gradually increased, and with lengthening intervals, so as to avoid the production of constitutional symptoms, except, perhaps, occasionally a slight rise of temperature, and continuing the injections for several months, until no general reaction is produced even by large doses; the nutrition of the patient being closely watched and the injections continued only so long as the

weight is kept up and the nutritive condition remains at a high standard. In other words, the aim being to produce repeated local reactions with but slight or no general reaction and gradual habituation to the tuberculin toxin. The doses and the interval between them should be carefully adapted to the needs of each case, and the best results by this method are obtained only with care, patience, and skill. Time is also an important element and my experience has seemed to confirm that of Petruschky in so far as the necessity of repeating a course of injections after an interval of several months, when susceptibility to reaction has returned. The reason for this is obvious when we reflect that all tuberculous foci in the body are not at the same stage of their development when the treatment is begun. When applied with care, avoiding the production of violent reaction and high fever, I have never seen any evidence that would lead me to think that the treatment had proved injurious at any time to the patients who were subjected to it.

Time will not allow me to discuss the various opinions held as to the nature of tuberculin reaction, or the question of artificial immunity in this disease, but I will merely lay before you, so far as it can be done by figures, the results of this treatment to the human subject under the most favorable conditions of environment, in so far as they relate to any apparent curative influence of the injections and to any immunizing effect as shown by the prevention of relapse. I have selected only the cases treated since 1894, as before that the details of the method were less understood, and it was often only temporarily applied. Since 1894 fifty-six cases have been treated by this method. It has been possible to follow the results in only fifty. Of these I have taken only the incipient cases, so as to avoid as much as possible errors of classification, although the results in the cases classed as advanced were proportionately somewhat more favorable.

There were 24 incipient cases and of these 20, or 83 per cent., were discharged as apparently cured. For comparison, if we take the last 113 incipient cases treated at the Sanitarium by climatic and open-air methods alone during the past three years, 82, or a little over 72 per cent were discharged as apparently cured; so it would appear from these figures that tuberculin had had some favorable influence on the results. Some little allowance, however, must be made for the fact that, even though all these cases were classed as incipient, those treated with tuberculin were selected with especial care. In order to procure some evidences as to the immunizing effect of this treatment and its power to prevent relapses, an attempt has been made to trace fifty apparently cured, tuberculin-treated cases and, for comparison, fifty untreated cases which corresponded as exactly as possible in point of classification on admission and discharge, and which were in the institution at the same time and remained the same length of time, have been studied with the results shown in the following tables:

¹ Koch's original tuberculin was used at the Sanitarium for a year after the announcement by this investigator of this new method of treatment. From that time, however, all the tuberculin has been produced at the Saranac Laboratory, and has been modified according to the indications which the latest researches on this subject seemed to call for. For several years a tuberculin made like Hunter's modification B. was principally in use. The general plan of separating the albumoses from the culture fluid laid down by Hunter was adopted, except that no heat was used at any time in the process. Before making an extensive trial of Koch's new T.R. tuberculin, it was thought best to study this substance in the laboratory. The researches made there by Dr. E. R. Baldwin and myself showed that samples of T.R., as it was first put on the market, contained living tubercle bacilli, and for this reason the substance as then produced was considered unsuitable for the treatment of human tuberculosis. Dr. Baldwin has also recently shown that, although the directions accompanying the bottles of the new T.R. tuberculin state that it contains ten milligrammes of solid substance, if the water and glycerin be evaporated only about four milligrammes of solid substance remain.

During the past year Hahn's tuberculo-plasmine made after the method of Buchner and Hahn, of crushing the bacteria with excessive hydraulic pressure, has been used in a limited number of cases.

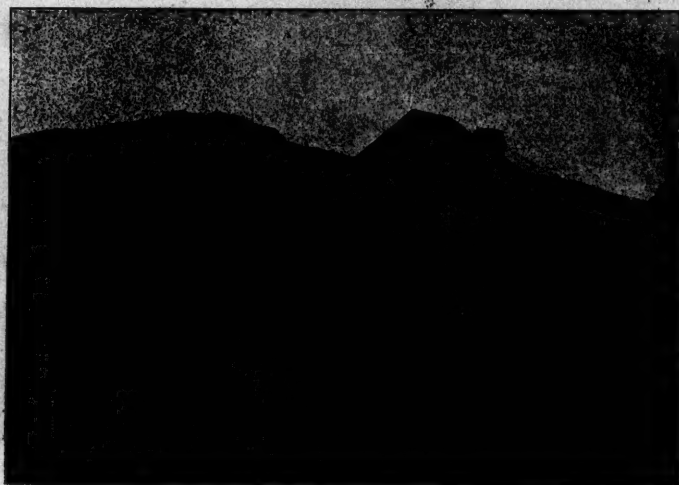
<i>Treated.</i>	
Not traced	3
Well; returned to work in former surroundings	29
Well; living out-of-door life in other good climates	7
Well; not working	5
Relapsed (living)	1
Relapsed (dead)	4
Died insane	1
Total	50

<i>Not Treated.</i>	
Not traced	3
Well; returned to work in former surroundings	21
Well; living out-of-door life in other good climates	10
Well; not working	5
Relapsed (living)	6
Relapsed (dead)	5
Total	50

Sanitarium thus far has led me to believe that, when carefully applied in suitable cases, it has proved apparently free from any danger, and that it has seemed to have some favorable influence in bringing about healing of the lesions, probably by inciting the formation of fibrous tissue. In this it resembles Landerer's treatment by injections of cinnamate of soda, this substance producing a local and general leucocytosis and stimulating the formation of fibrous tissue around the tubercle and thus tending to limit the disease. That a certain reaction of the tissues, as evidenced by vascular hyperemia and leucocytosis, is capable of favorably influencing a tuberculous process, is shown in the cure of peritoneal tuberculosis by laparotomy, which occurs as the result of the hyperemia of the tissues brought about by the traumatism of the operation and their exposure to the air.

The immunizing effect of Tuberculin as observed in the human subject would appear to be more uncertain both as to degree and duration, and artificial immunity is still the unattained goal of experimental research. While the evidence, therefore, as presented by the cases treated with tuberculin at the Sanitarium is somewhat favor-

FIG. 2.



The Inslee Cottage.

Of the 50 tuberculin-treated cases discharged apparently cured at varying periods since 1891, 3 could not be traced and 41 remain well to this date. If we take 50 untreated patients who were also discharged apparently cured at the same periods of time, and leave out three to correspond with untraced tuberculin-treated cases, 36 up to date are known to have remained well. These figures show a slight percentage in favor of the tuberculin cases, but, unfortunately, are not perhaps sufficiently marked to be in any way conclusive.

My experience with tuberculin treatment at the

able to this form of treatment, it is restricted as yet to a very limited number of cases, and it must be admitted that these are usually such as are likely to recover under climatic and open-air methods alone.

The exact results obtained at the institution by the combined climatic and sanitarium treatment are difficult to express in figures, because they are generally influenced by the class of cases accepted. With advancing familiarity with the disease and improved methods of diagnosis, our standards have also steadily altered, so that what would have been considered an incipient case fif-

teen years ago would be classed as an advanced one to-day in most instances. Furthermore, the term "cure" can also be used only in a relative sense, time as measured by years being the only criterion of cure. Of late the results obtained have been better than formerly and this is due, no doubt, not only to improvements in methods and plant, but to the fact that more really favorable and early cases are available than formerly.

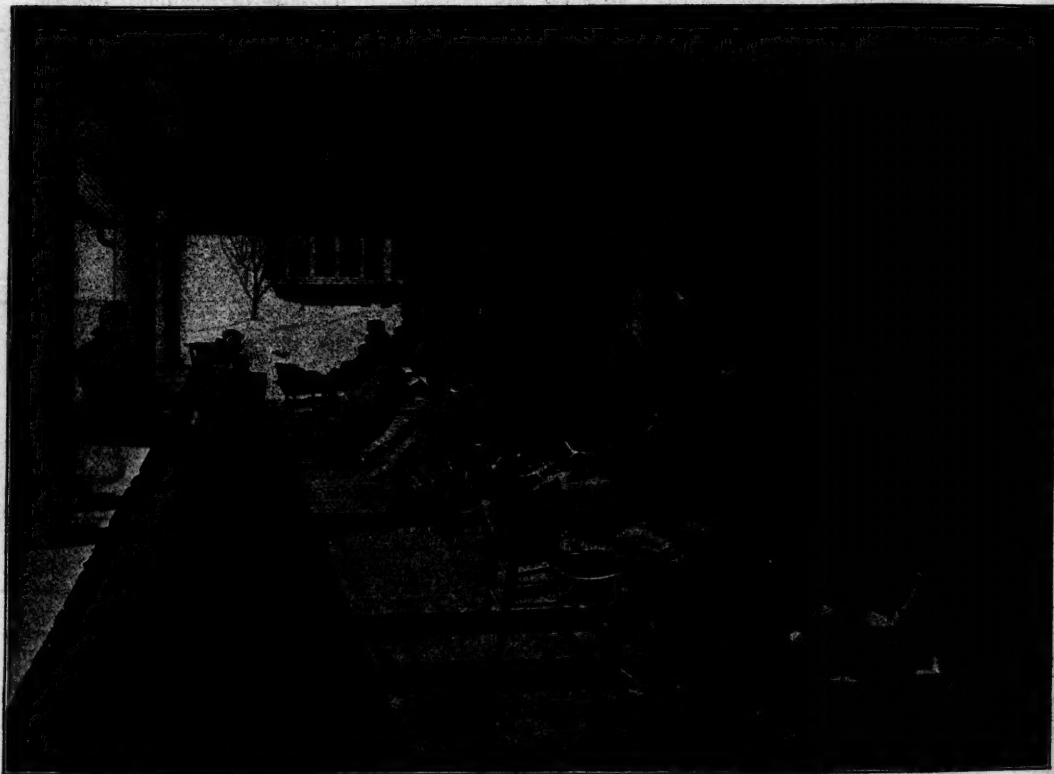
In making out the yearly reports of the institution, I have adopted from the first and printed in each report the following classification, imper-

3. *Far Advanced*.—Cases in which both the rational and physical signs warrant the term.

4. *Apparently Cured*.—Cases in which the rational signs of phthisis and the bacilli in the expectoration have been absent for at least three months or who have no expectoration at all; any abnormal physical signs remaining being interpreted as indicative of a healed lesion.

5. *Arrested*.—Cases in which cough, expectoration, and bacilli are still present, but in which all constitutional disturbance has disappeared for several months; the physical signs being inter-

FIG. 3.



"Taking the Cure" in Winter.

fect as I feel it to be, as the best I could devise to express the classes of patients admitted and the results obtained:

Definition of Terms Employed.

1. *Incipient*.—Cases in which both the physical and rational signs point to but slight local and constitutional involvement.

2. *Advanced*.—Cases in which the localized disease-process is either extensive or in an advanced stage, or where, with a comparatively slight amount of pulmonary involvement, the rational signs point to grave constitutional impairment or to some complication.

preted as indicative of a retrogressive or arrested process.

An idea of the best results obtained thus far can perhaps be gained by a glance at the following table, copied from the last three annual reports, 1897-98-99, provided the figures are considered together with the classification adopted. Patients who have remained less than three months are put in a separate class, as little can be accomplished in the way of permanent results while in the institution for so short a period.

A glance at the table shows the following: Out of 323 patients who remained an average of 8¼ months in the institution, 113 of which were classed as incipient cases, 151 as advanced, and

59 as far-advanced, 109 were discharged apparently cured, 104 with the disease arrested, 73 improved, 31 unimproved or failed, and 6 died. This gives the best results as yet attained at the sanitarium; i.e., 33 per cent. of apparent cures, and 32 per cent. of cases in which the disease was arrested.

TABLE.

Patients who Remained an Average of 8 3/4 Months.

Condition of patients when admitted	Apparently cured	Disease Arrested	Improved	Unimproved or failed	Died
Incipient Cases, 112	82=72.95%	25	4	2	0
Advanced " 131	27=17.88%	67	43	13	1
Far " 59	0	12	26	16	5
Total, 323	109=33.74%	104	73	31	6

If we study the gross results in the 1200 patients admitted during the past fifteen years, the result is as follows:

Twenty-three per cent. were discharged as apparently cured; 56 per cent. were discharged with the disease arrested or much improved; 19 per cent. were discharged stationary or unimproved; 2 per cent. died in the institution.

I am quite aware that cure in tuberculosis is but a relative term and that time is the only test of cure; a test which becomes more and more discouraging as the period of its application lengthens and we become more familiar with the relapsing nature of the disease. Nevertheless we have attempted to determine as far as was practicable the permanency of the results obtained, extending over a period of fifteen years to date. Of the 1176 patients discharged alive about one-half are still living, and one-half of this number have been heard from as being perfectly well. This proportion of one-quarter of the whole number covers the entire fifteen years; and the percentage, of course, improves each year as more early cases are admitted. The permanency of the recoveries depends necessarily a good deal on the environment to which the patient returns. If he is obliged to go back to a laborious life or an indoor occupation he is much more likely to relapse than if it is possible for him to return to a good climate and an outdoor existence.

The education which the patients receive at the sanitarium as to the nature of their disease and the methods to be relied upon in combating it is of the utmost value to them, enabling them to preserve their health and avoid relapses after they have left the institution; and this education is not limited to themselves, but is imparted by them to the great mass of people with whom they come in contact.

In addition, the attempt to cure pulmonary tuberculosis by institutional treatment and the practical demonstration which it has given of the possibility of accomplishing this in many cases have cast a ray of light on one of the darkest prob-

lems which confront medical science and have proved an object-lesson which has, perhaps, not been without influence in creating the present popular demand that the State supplement private philanthropy in the establishment of similar institutions under its control.

THE PREVENTION OF SCARLET FEVER.

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IN few other diseases are preventive measures so productive of good results as in scarlet fever. Although a far more serious disease than measles and most of the other infectious diseases, its spread may be more effectively controlled. No one will allege that the measures necessary to the attainment of that end can be carried out without encountering difficulties. They are many in number and very complex and demand on the part of the practitioner much thought and perseverance. But they are effective in preventing the spread of the disease, and the conscientious physician will not regard the difficulties encountered as an adequate excuse for their non-enforcement. When we consider the high mortality of scarlet fever and the grave sequelæ which are common in those who survive, we are forced to feel that neglect of preventive measures is little short of criminal. Nevertheless important details of prophylaxis are not infrequently ignored or completely forgotten by the attending physician. Certain measures are sometimes rigidly enforced while others of equal importance are neglected. The disease may thus be spread broadcast by leaving a single loop-hole unguarded. It is the design of this paper, therefore, to call attention to certain details in management and prevention upon which error is frequently made. Time forbids an exhaustive discussion of the whole subject of prophylaxis of scarlet fever and no such effort will be made.

The isolation of children known to have been exposed to scarlet fever may not be strictly necessary, but close observation is an important measure of prevention. It is true that the disease is not contagious during the period of incubation. It is doubtful, indeed, whether it is contagious before the appearance of the eruption. Evidence has recently been presented to show that children in contact with scarlet-fever patients for several hours after the initial vomiting have not contracted the disease. Still, it is difficult to rid oneself of the fear that there may be exceptions to the rule and that exposure during an early stage may in some cases be followed by serious results. The fact, however, that as a rule contagion is not active until the eruption has developed is an extremely important one and renders isolation during the latter stages far more effective and, hence, of greater importance. We

¹ Read before the New York Academy of Medicine, April 2, 1900.

have thus in scarlet fever a distinct advantage over measles, for in the latter disease the period of contagion begins two or three days before the appearance of the eruption.

As the period of incubation in scarlet fever is short and somewhat variable, every child who is known to have been exposed should be isolated. Following the general law that the more severe the disease, the shorter the incubation, the period of incubation in scarlet fever is rarely more than four days. In my own experience, a period of about two days has been the most common and I have seen a case in which it was but little over twelve hours. In nearly 90 per cent. of the cases it is between two and six days. Although a feeling of security is warranted after four days, no person, who has been exposed, should be considered safe for less than a week.

The question of sending the other children away from home is often a serious one. The objection is frequently made that they may carry the disease to other places, or the parents are unwilling to have them ill away from home. These are valid objections if the fears are well founded. The decision must rest largely on the time of the exposure. If the exposure occurred before the appearance of the eruption, there may be little fear that the disease has been contracted. If exposure occurred during the stage of eruption, the probability of illness will be great. If the patient is isolated soon after the initial symptoms have appeared, other children in the family are very unlikely to have taken the disease from him.

Whatever may be thought of the propriety of isolation during the period of incubation, there can be no doubt of its importance after the first symptoms have appeared, for the rash, together with the possibility of infection, appears often within twelve hours after the invasion. Four symptoms, when occurring in combination, are extremely suspicious of scarlet fever, *i. e.*, vomiting, fever, rapid pulse, and sore throat. The vomiting, as a rule, occurs suddenly with little or no nausea. It is forcible and sometimes projectile in character. It may occur but once or may be repeated several times during the first twelve hours. In my own experience, it has been a constant symptom.

The temperature rises rapidly and naturally ranges high in scarlet fever. In mild cases it may be found at the first visit not above 101° F., but it is frequently 103° or 104° F. I once examined a child whose sister had become ill with scarlet fever the day before. The temperature was normal and apparently she was in usual health. I had scarcely left the house before she was seized with vomiting and I was at once recalled. On my return, in little more than an hour, the temperature was 102.5° F. and the throat was decidedly red.

I have come to regard an abnormally rapid pulse as a symptom of considerable importance. I would by no means call it pathognomonic and possibly not diagnostic; but it is certainly very

suggestive. A pulse of 150 at the outset is not unusual.

Sore throat is usually complained of early. At the first visit, as a rule, the hard palate and pillars of the fauces will usually be found red and congested. Sometimes the peculiar exanthem of scarlet fever will be seen thus early. This consists of numerous minute dark red macules on a reddened base, scattered over the hard palate. Frequently, however, at the outset nothing but diffuse redness will appear. Patches of pseudomembrane may occasionally be seen at the first examination but they are not common before the third day. The tonsils may be smeared over with a tenacious exudate closely resembling pseudomembrane. There is not infrequently a nasal discharge, which may consist of clear tenacious mucus or muco-pus. In mild cases the throat symptoms at the outset may be slight.

I would not be understood as considering the symptom complex of vomiting, fever, rapid pulse, and sore throat as affording positive evidence of scarlet fever. They are sometimes seen in other conditions in young children, notably acute indigestion and *la grippe*. They are, however, always suggestive of scarlet fever, sufficiently so, in fact, to warrant the isolation of the patient until their significance has been more fully demonstrated. The appearance of an eruption following within twenty-four hours after such an onset in the vast majority of cases is sufficient to establish a diagnosis. The practitioner will frequently see, however, cases of a mild type whose early diagnosis is extremely difficult. Even in mild cases there is usually an onset of vomiting with slight fever and sore throat. During the past few months, most practitioners in New York have undoubtedly seen cases of *la grippe* accompanied by an eruption which simulated that of scarlet fever. The fever, sore throat, flushed face, and perhaps nausea, followed after a short time by a rash, have made up a picture very suspicious of scarlet fever. While it is possible that cases of real scarlet fever have been considered as influenza, it is certain that there has been a considerable number of cases of *la grippe* with an eruption.

The strawberry tongue is not an early symptom of scarlet fever. The strawberry tongue is an especial favorite with young doctors. They see it frequently and are always alarmed by it. A white tongue with red spots is not characteristic of scarlet fever in the slightest degree but is seen in every-day practice. The term should be restricted to the red tongue with enlarged papillæ which follows a coated tongue on the third or fourth day of the disease. Flint was among the first, if not the first, to describe this peculiar appearance of the tongue, which he did in the following words: "The tongue early in the disease is generally coated. While the coating remains, frequently the papillæ projecting through it have the appearance of numerous red points; the surface of the tongue looks as if cayenne

pepper or red sand had been sprinkled over it. This is seen in other affections. Another appearance is quite distinctive of scarlet fever. In the progress of the disease, the coating exfoliates, leaving the surface of the tongue clean and reddened; and the papillæ being enlarged, the appearance is strikingly like that of a red strawberry. The strawberry-like tongue is a pathognomonic symptom; it is peculiar to this disease. It is often but not uniformly present."

The strawberry is not a white fruit with red seeds, but a dark red fruit with a rough surface. It is taxing the imagination, therefore, to apply the name of strawberry to a white tongue, and totally untenable to lay stress on such a tongue in the early diagnosis of scarlet fever. I am well aware that several prominent writers have done this, but I scarcely need to remind you that an error once started on the rounds of medical literature is very hard to kill. It will sometimes creep into the work of the most careful of writers.

The patient having passed through the acute stages of the disease, the question arises as to how long he is capable of infecting others, and, as a corollary, how long he should be isolated. It is commonly stated that the most infectious period is during the height of the eruption. This is undoubtedly true. There is then a decline in the infectious power, which is again followed by a period in which that power is renewed. The latter occurs during the stage of desquamation. The patient is dangerous to others as long as the slightest desquamation continues on any portion of the skin. The duration of this period is extremely variable, and the most common error, perhaps, consists in being guided by a fixed number of days. The conventional forty days is only to be regarded as approximate. It is rarely too long. Desquamation is liable to persist in small areas of the body after it has disappeared from other portions. It is frequently very difficult to determine in such cases whether we have to deal with a local patch of scarlatinal desquamation or with eczema brought about, perhaps, by irritation, the result, it may be, of overzealousness in bathing and anointing. These circumscribed areas are most commonly found about the flexures of the joints.

Desquamation is liable to persist about the finger-nails after it has disappeared from every other part of the body. There can be no more dangerous place for such persistence, for the scales are liable to fall on any article which the patient may touch and may hence be conveyed to a distance. There are innumerable authentic cases of conveyance of the disease through letters written by desquamating hands. I have myself known of such an occurrence, the letter coming several hundred miles through the mails. The hands and fingers should be particularly scrutinized before the quarantine is raised.

The question of secondary and tertiary desquamation is interesting from the standpoint of prophylaxis. The scales from these desquama-

tions are certainly less infectious than those of the primary desquamation. It is the belief of some observers that they are not capable of conveying the disease. There seems to be authentic evidence, however, that even in tertiary desquamation the scales have been infective and it is the part of wisdom, therefore, to regard every such case as unsafe. Until a specific germ is discovered, these questions must be determined solely by clinical observation and there will be, as a necessary result, a greater or less degree of uncertainty.

Desquamation is not the only factor by which the period of isolation is to be determined. Purulent discharges certainly contain the infective principle of scarlet fever. After it, no child who is still suffering from otitis, chronic pharyngitis, purulent coryza, suppurating glands, or a purulent discharge of any kind, should be allowed to mingle with others. Holt refers to a case in which the opening of a post-scarlatinal empyema in a surgical ward was followed by an outbreak of scarlet fever, and to another case in which the disease was communicated through a purulent nasal discharge after eleven weeks. Ashby insists upon retaining all cases in the hospital for forty-two days and discharging none until desquamation is complete. Still, he has found that from 2 to 4 per cent. of such cases are infective.

These dangers have not been sufficiently recognized and as a result the disease has undoubtedly been communicated to thousands of children. A consideration of facts, as demonstrated by authenticated cases, proves the un wisdom of adopting any single period as necessary for the quarantine of scarlet fever. In many cases six weeks is ample and the patient may be released with perfect safety to others. In other cases he is almost as dangerous at this period as in the first week of the eruption. The rule should be, not a fixed number of days or weeks, but the time that is necessary for the disappearance of all desquamation and of every kind of purulent discharge.

The question of infection after release from quarantine has of late been the subject of some discussion in England, and an attempt has been made to prevent more fully what they there call "return cases." At the Monsall Fever Hospital of Manchester, for example, the following method has been adopted: Certain wooden pavilions are set apart as convalescent wards for scarlet-fever cases, no case being sent into these wards until six weeks have elapsed from the onset of the illness. Even then desquamation, as well as all purulent discharges, must have ceased. The convalescent children are encouraged to take exercise freely in the open air. I am unable to say how long they are retained in these wards, but the statement is made that since this system has been in operation there has been no "return case," although they were not uncommon before that time.

The question regarding the isolation of mild

but undoubted cases of scarlet fever is frequently a trying one. In some of these, desquamation is very slight and there is no purulent discharge. It is undoubtedly a fact that the quarantine can be raised in a few of these cases in less than six weeks. Still the desquamation, even when slight, is liable to continue for a greater period than its intensity might lead one to expect, and these mild cases require more than ordinary precaution.

Grave errors are constantly being committed by physicians in making a diagnosis of German measles, roseola, or stomach rash, when the condition is in fact mild scarlet fever. Such diagnoses are sometimes more than errors; they are grave sins. It is through these mild cases that the disease is spread broadcast. Not only are such cases dangerous to the members of their own families but to others who come in contact with them in the most unsuspecting manner. Every doubtful case should be isolated until the appearance or non-appearance of desquamation aids in determining its true character. Reasonable parents do not object to such caution. There are few who do not prefer the trouble involved by temporary isolation to the danger of exposing other children. Unfortunately, parents are not always reasonable, and it is but justice to physicians to say that they are not in every case as gravely at fault as it might seem.

The question of school attendance immediately arises upon releasing a child from quarantine. The Health Board of this city wisely requires a certificate from one of its own inspectors before a child who has been excluded from school can be re-admitted. The system of school inspection now in force in New York cannot be too highly commended. Its value and importance are amply shown by the fact that last year there were excluded from the city schools 32 cases of scarlet fever, 133 cases of diphtheria, 253 cases of measles, 276 case of pertussis and 1627 cases of contagious eye-disease.

At present the means by which the New York schools are chiefly instrumental in disseminating scarlet fever is through the clothing of children who may have come from families in which the disease exists. It is true that children from such families are supposed to be excluded from school, but there are unquestionably many unreported and concealed cases, which thus become dangerous to others through mediate infection.

The question of the advisability of closing schools in the case of an epidemic of scarlet fever must be settled differently in different communities. In the country and in small towns, where the children will be separated from each other when the schools are closed, their closure may be an important measure of prevention. Moreover, in such communities the various families are known to each other. Illness is at once known and contagion guarded against. In large cities, on the other hand, the conditions are quite different, particularly in the crowded tenement regions. Here the children cannot and will not

be confined to their homes, but will mingle with each other all day long. Closing of the schools will not prevent it. In addition to this, the daily inspection of the children in school is a great safeguard against the spread of disease. Under present conditions in New York, the closing of the schools for the purpose of preventing such diseases as scarlet fever and diphtheria would unquestionably produce a result quite the contrary.

The importance of hospitals for the treatment of scarlet fever and diphtheria is not yet fully appreciated by the profession. We have now in New York hospitals designed to meet every requirement in this direction. At the Willard Parker Hospital no case is refused because of inability to pay. It has unquestionably been the means of saving the lives of many children, not only of those suffering from the disease, but of others who would have been exposed had the patient been left in his home. More recently, the Minturn Hospital has been established to relieve a very urgent need. There are many people in a great city, able and willing to pay for treatment, who are so situated that isolation of infectious diseases cannot be enforced, or can be enforced only at great expense and trouble. Well-to-do people living in hotels, boarding houses, or apartments, or visiting relatives, have sometimes been placed in dire straits by the development in a child of scarlet fever or diphtheria. To such this hospital is a most beneficial institution. There, every advantage may be obtained, which can be afforded by cheerful and sanitary surroundings, trained nursing, and skilled medical attendance. The outlay is light when one considers the expense which necessarily accompanies a serious infectious disease. Should the parents desire, their own physician can attend the patient. A parent or friend may remain constantly with the child, being subjected only to the same rules regarding isolation and quarantine that are applied to all inmates of the hospital.

It cannot be denied that medical men through carelessness have sometimes been instrumental in carrying scarlet fever. No other disease is so frequently transmitted through the agency of clothing. Sputa, coughed out during examination, or scales adhering to the clothes may cause the disease in other children upon whom the doctor may be in attendance. I feel justified in making the statement that the practitioner should never visit a case of scarlet fever without wearing a gown. Such a gown can be made very cheaply of cotton cloth. It should be made to button closely about the neck and wrists and should be long enough to reach to the feet. When beginning the treatment of a patient with either of these diseases, one of these gowns should be taken to the house. It should be put on before entering the sick-room and should be hung up in the bathroom or other suitable place upon leaving. A cap to protect the hair is desirable, but not so necessary as the gown. Upon the termination of the case the gown can be thoroughly

boiled and used again. The trouble and expense involved are thus trifling. In a considerable experience, I have never found a child or parent who objected to it. On the contrary, it inspires confidence in the physician as a careful man, and removes the possibility of his ever being charged with bringing the disease into the house, should its occurrence in one of his families be unexplainable. It is a safeguard both for the physician and his patients.

It goes without saying that the hands and face should be disinfected after every visit to a scarlet-fever patient. The same is true of the stethoscope, which should be used for all physical examinations of the chest. The tongue-depressor or any other instrument used about the throat should not be taken from the room. The doctor himself should not carry out the details of treatment farther than is strictly necessary. It is difficult for him to do so without danger of carrying the disease. It can only be avoided by more thorough disinfection than most doctors are willing to carry out. In few diseases is the importance of a qualified nurse greater than in scarlet fever. One should be secured wherever it is possible. Not only are the details of prevention and treatment carried out more thoroughly and satisfactorily, but the doctor is relieved of many duties which he should not be obliged personally to perform. The value of a competent nurse in scarlet fever can hardly be overstated.

The selection of the sick-room is of much importance. In tenement-houses and flats there is but little room for choice. The child should be placed in the front room and should never be allowed to remain in a middle room or dark room. The door in the hall should be sealed with strips of paper, as is done in fumigating. The door communicating with the rest of the apartment should be kept closed, and the children should be kept in the rear rooms, even if it is necessary to remove the beds from the intervening rooms. If possible, the other children should be sent away. If the parents are intelligent and faithful in obeying instructions, the spread of the disease may be prevented, even in a small flat, but it is very difficult and will require unremitting vigilance during its whole prolonged course. It is practically impossible if there is but one person to care for the sick and look after the well. To ensure any safety whatever, the nurse must be isolated, as well as the patient.

Whether the patient lives in a flat or in a house, the ease of preventing the spread of the disease is greatly augmented if there can be a third person to act as intermediary between the nurse and the person who has the care of the other children. To this person may be assigned the duty of carrying the food and various articles required by the nurse and of carrying away the soiled clothing and performing the numerous offices outside the sick-room. She thus needs to come in direct contact with neither the sick nor the well. In the houses of the well-to-do, where

nurses are employed, a trusted servant may fulfil this office. It is a hardship for the mother to make a choice between the invalid and the other children, particularly if they be small, but the necessity of her doing so is of the greatest importance. The statement frequently made that the nurse should not eat or sleep in the room with the patient is entirely proper, if such an arrangement can be carried out. It is usually impossible, however, in any except well-to-do families, where a whole floor can be utilized. Where such an arrangement can be made, the conditions are the most satisfactory than can be devised. When a floor is not available, the room should be selected which can be most readily isolated and will at the same time be convenient and habitable for the attendants. Six weeks' confinement to a single room is a trying ordeal, and isolation during the last days of the period can be more strictly enforced if the room is cheerful and comfortable. While a room at the top of the house is for many reasons the most desirable, one on the floor below should be selected should there be no bathroom on the top floor. The passing to-and-fro to the bathroom will frequently undo all other efforts at isolation, not to speak of the additional labor involved. A most satisfactory arrangement is a back room on an upper floor opening into a bathroom, the latter having also a second door into the hall. Two doors thus intervene between the hall and sick-room. By placing a small gas-stove in the bathroom much labor is saved and isolation can be made complete. I have recently attended a case in a family of young children in which the sick-room was thus arranged and was but one flight up. All cracks and key-holes were covered with strips of paper, the room being thus hermetically sealed against the rest of the house, except for the passage through the bathroom. The disease in this family was limited to one child.

The hanging of dampened sheets before the doors is a measure of some practical value. It is not to be supposed that they can disinfect the air or destroy the germs, but they do prevent currents of air when the doors are opened and are a constant reminder of the necessity of care.

The preparing of one room for a sick-room in a house where there are children is a wise measure. Such a room is not infrequently found in modern houses and should be more common. It may be made as cheerful and as available for ordinary use as any other room. The walls and ceilings are painted or covered with washable paper. The floor is polished and covered with rugs instead of a carpet. The hangings are easily removable and there is no upholstered furniture. The furniture is of polished wood or white enamel and is made without carving or deep grooves. A room, thus arranged, can be quickly put into commission as a sick-room, and will greatly simplify the question of prophylaxis.

General inunction of the body is a most effective measure, both of treatment and prophylaxis. It may be begun as soon as the eruption

has appeared and should be continued until desquamation has ceased. This method, however, will vary in different stages. During the stage of eruption before desquamation has begun, a simple bland oil is most desirable. Antiseptics can be of little avail and all irritating preparations should be avoided. Lanoline is one of the best of these or a mixture of equal parts of lanoline and cold cream. These preparations, however, are somewhat expensive. Vaseline, therefore, may be employed in their stead, and is no doubt the most common preparation used. Some of the cheaper grades of yellow vaseline are decidedly irritating to some skins. When itching and irritation of the skin is great, a five-per-cent. ointment of boric acid and vaseline is sometimes effective. Sponging with a solution of borax and water, followed by carbolized vaseline, will also give temporary relief. Carbolized vaseline, however, should not be used over large surfaces. It is true that absorption is not active through the healthy skin; but in scarlet fever we do not have a healthy skin, and it seems quite possible that absorption might occur. In a disease in which the kidneys are frequently involved, it is unwise to run any risk of introducing so irritating a substance as carbolic acid.

After desquamation has begun, the objects of inunction are quite different. The procedure then becomes a matter of prevention as well as treatment and the most important object is to soften and remove the scales, thus preventing their dissemination with the resulting danger of spreading the infection. It is the belief of many that the scales may be disinfected by adding antiseptics to the oily substance used for inunction. This seems somewhat doubtful. It is a point, however, very difficult of decision by clinical observation and must be settled at some future time by the bacteriologist. The general fact is at least positively settled that proper care of the skin during the stage of desquamation is one of the most effective means of limiting the spread of the disease. Antiseptics may be added to the ointment or oil used for inunction. The boric acid ointment already referred to is one of the best. A two-per-cent. ichthyol ointment has its advantages but is objectionable to many patients because of the odor. Carbolic ointment may be used over limited areas. During this stage the inunction may be preceded by a bath or sponging with water at the temperature of 90° F. The water may be plain or it may contain a small amount of salt or borax. The use of an antiseptic soap is advocated by many practitioners, resorcin soap being, perhaps, the most commonly used.

Ointments or oils of disagreeable odor are objectionable. The appetite is frequently poor and the problem of nourishment is difficult. It is easy to increase this anorexia by disagreeable odors. A preparation having even a slight odor becomes perceptible when applied to the whole surface of the body. Such odors are often intensified when applied to surfaces not open to the

air, particularly when fever or perspiration is present. This is the chief objection to be urged against the animal fats, like lamb fat, mutton tallow, or beef suet. The bacon rind, popular in some parts of the country, has the same objection and possesses no advantages. Lard has but little odor, but it is difficult to obtain it pure in the cities. It is unstable and quickly becomes rancid. Fats are prone to become rancid by being broken up into glycerine and fatty acids. The physician should always make sure as to the character of the preparation used for inunction. A rancid fat in a severe case of scarlet fever may cause great irritation and prolong the period of desquamation.

There are many other matters of importance in the prevention and management of scarlet fever. As stated at the beginning of the paper, however, it was not my intention to consider them all, but certain ones only, which are most frequently neglected by the general practitioner. Opinions will no doubt differ as to the relative importance of these details and some may feel that measures have been omitted which are as important as some of those which have been included.

It must be remembered that in scarlet fever we have not the sure basis of knowledge which we possess in diphtheria. Until a specific germ has been discovered and its life-history studied, we must rely on clinical evidence alone. We must, therefore, expect to find differences of opinion on almost every detail of pathogenesis, prophylaxis, and treatment.

THE STATE OF NEW YORK AND THE PATHOLOGY OF INSANITY.

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THE leading chapter in the century's history of the care and treatment of the insane in America will be the humane and progressive record of the Empire State. From the ward for lunatics in the New York Hospital in Colonial days to the recent "State-Care Act," New York has been abreast if not foremost in this eleemosynary duty to its dependents, as the sentiment of the time has indicated. The tardiness in providing for all the dependent insane by the State was more than compensated by the imperial measures which carried the State care policy into effect. The great movement was not a revival of sentiment, supported by the emotions, creating a name, and then dying from inanition. It came to stay and it has been sustained faithfully, becoming a fixed public burden, and in this closing year of the century having no real opponent in the Government of the commonwealth. "State care" has not been a name without other merit. Its purpose has

¹ Read before the American Medico-Psychological Association May 22, 1900.

been realized in a remarkable degree. Remarkable in the fact that it is the only instance in the history of the States where the name has been merely an unrealized claim. There is to-day in the State of New York no acknowledged dependent insane person in an almshouse, penitentiary, jail, reformatory, or any place of custody other than a State hospital. Can this claim be made elsewhere? If so it is a glorious example of a fearless State Government following the precedent established by the Empire State. It is the antithesis of the shameful, cowardly, miserly policy of a wealthy State establishing almshouse-treatment of the insane by law; an example which should make its citizens responsible for it hide their faces from the Sun of Righteousness, who taught the doctrine of mercy and charity. "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

In carrying into practical effect the provisions of the State-Care Act, the supervisory body—the State Commission in Lunacy¹—found it expedient to establish a basis of cooperation between all the hospitals and institutions in its Department. It was not only expedient but it was essentially requisite for the attainment of the great end in view—the most effective treatment and care of the insane in the most economical way. In addition to cooperation there must be a certain degree of uniformity in method and administrative practice. Not, take notice, in medical practice, for in this there was accorded the same freedom from interference and allowances which existed theretofore, or which now obtains elsewhere. If uniformity of therapeutics, personal treatment, classification or research, resulted in some degree, it came from association and not from direction. I can fearlessly appeal to the representatives of the Department, Superintendents of the State Hospitals, brother-members of this Association, who I am proud to refer to as the best representatives of psychiatric practice in New York, for a confirmation of this statement. It was the policy and practice of my predecessor, as it has been of the writer, to allow the widest scope within the limits of safety and the welfare of the patient, to individual effort and experimentation. Otherwise, progressive medicine would be a name only and dry rot an actuality. Thus, cooperation and a scientific franchise to hospital physicians has created a psychiatric practice in our State Hospitals which is unsurpassed, and which, I believe, will stand the test promulgated by a versatile neurologist, whose peerless imagination has been the delight of thousands in many editions and seven translations. However, it is well known that the prophetic and delightful parable painted in entrancing words by this masterful brother, was an actuality contemporaneous with his prophecy.

In investigation of the causes of insanity, in establishing the morbid anatomy of the brain, in pathological departments of hospitals for the insane, and in creating a special literature, New

York has been a pioneer. The *American Journal of Insanity*, now in its fifty-sixth year, is the product of the Utica State Hospital in its earliest history. In his annual report for the year 1868, Dr. John P. Gray says: "I have long been convinced that the extensive field afforded by this institution for pathological investigation should be cultivated more thoroughly than could possibly be done by the ordinary medical staff." He called to the attention of the managers the importance of employing a professional man of special attainments and skill in the department of pathology, to make microscopic examination of the nervous tissue, and to test the value of instruments of precision for diagnosis, "and such other pathological researches as might be deemed valuable to medical science and the public generally." In his report four years later, he gives a résumé of the work accomplished which appeared of sufficient importance to suggest legislative authority. A bill was unanimously passed the same year creating the position of special pathologist and providing for the equipment of the laboratory, which was accomplished with the aid of Dr. J. J. Woodward, then assistant surgeon, U. S. A. The following year Dr. Gray reports, "the results so far attained in this field of special investigation have fully justified the expectations we had formed of the value and importance to medical science and the public interests in recommending some years ago the organization of this department of research." There must be a number of those present who recall the fine technical work exhibited by Dr. Gray at several meetings of the Association about twenty-five years ago, as the product of the Utica laboratory. The experience at Utica and especially the causes which led to the decadence of the laboratory and finally to its extinction are worthy of consideration at this time, as they apply now, as they ever will, a lesson showing the mutual dependence of one department of medicine upon others in the scientific work of hospitals. The special pathologist at Utica for the first three years was a gifted physician, Dr. E. R. Hun. It was his work which created the law establishing the laboratory as a permanent institution. He was succeeded by Theodore Deecke, a philosopher but not a physician, a master of technic but ignorant of symptoms, a man jealous of his department, possessing scientific attainments of high order, but too little sympathy with the expression of insanity as witnessed constantly by the physicians of the staff. His work was admirable, but inanimate. He could show the morbid conditions, but could not relate them with the clinical facts, and as a consequence his work became a mechanical process and died from the same causes which will ever destroy values by the separation of clinical and pathological research. It is a lesson which should have been heeded. The work at Utica, however, was sufficiently impressive to mold into the organic laws of the four later State Hospitals, provision for a special pathologist. The privilege was accepted in only two of the hospitals and only for a short period.

¹ Hereafter referred to as the "Commission."

The lesson taught at Utica was undoubtedly a restraining cause, and it was rather to the strict and almost to the prohibitive separation of the pathological and clinical departments that the other hospitals united all medical work in the regular medical staff. Some admirable researches were conducted by members of the staff, which in practical value exceeded all that was accomplished at Utica during the existence of the special department. Small laboratories of great comparative merit were earnestly worked by some of the hospital physicians from time to time. Had the minor and technical difficulties been overcome by capable instruction in these instances, the results might have been what we hope for but have not seen. The difficulties that are encountered by the hospital physician who wants to unite his clinical work with pathological research are almost insurmountable. Technic, in the interval between college and the evolution of a fixed point in view, leaves him stranded and he must begin at the bottom for his preparation. By the time he is prepared for good work there may come promotion and burial in administrative duties. The work he has done may be too immature for application, has failed of record, and is lost to his successor. Here and there may be some brilliant discovery in its incipient stage, but without persistent research it is soon buried in a mass of detail and lost to view.

With the cooperative spirit which was the hematin of the life-blood of the State-Care Act, there was created the desire to unite pathological research, then in a more or less active stage in a number of the State Hospitals, in a scientific center. The initial proposition led to quite active argument and no little opposition grounded on common sense and experience. Perhaps the most forceful argument against this movement—and experience has actually proved it prophetic—was the belief and the claim of several superintendents that centralization of research in a great central laboratory would dampen the ardor of individual hospitals, and especially of individual members of the medical staff, who would be debarred from working on original lines without the approval of the central laboratory or the supervising pathologist.¹

¹ From the Eighth Annual Report for the year 1894 of the St. Lawrence State Hospital. "Closely associated with the clinical study of insanity is that of pathological and etiological research. It is maintained that these questions, mighty in themselves, could better be assigned to some separate department of the State service; and this is undoubtedly true if the State desires to add to its eleemosynary work that of scientific investigation. It may well be considered doubtful if the State Government will look favorably upon this additional burden. It is also questionable if the results that would be obtained would far exceed previous efforts in pathological work carried on in a distinct department at one of the State Hospitals at large expense to the State. The usefulness of a central (or common) laboratory for all the State Hospitals will depend wholly upon the personnel of its organization, and the same chances will thus have to be taken that each medical superintendent assumes in the appointment of his medical staff officers, with less chance of correcting errors. The temptation to make a central laboratory useful for the community in which it is situated, and for the individual in its organization, to the exclusion of distant institutions, will not always be resisted. It will also reduce, if not dispose of, the individual hospitals of laboratory work, which is one of the strong inducements to young medical men to engage in hospital practice for temporary periods."

"It is well to consider also that the best results in science have not emanated from public and paid work, but from voluntary efforts and frequently from obscure sources. The brains of men cannot be prodded to produce, like the soil, but must be stimulated by an interest that needs more than a departmental service to maintain. The

It is regretted that the discussion on the merits and demerits of centralizing research, which preceded the creation of the Pathological Institute, failed of record except in a few instances. The remaining impression of its astuteness, its prophetic foresight and the results which might reasonably be anticipated, would make it eminently fitted to supplement this discussion. At that time and for several years, the hospitals had accomplished much practical laboratory work chiefly related with clinical problems, although but little of the finer technical work had been attempted. Whatever was accomplished was wholly due to the praiseworthy spirit of research of individuals who would sacrifice selfish and personal interests and comforts to attain the end in view; and it may be recognized as a rule with no exceptions that from such material has developed the scientist of the class who has made pathology what it is today. The history of pathological advancement shows that it has not been the machinery and organization created with methodical acumen from an unlimited treasury to which is due original discoveries, but to the solitary individual, whose very needs create a stimulant, who, perhaps, in his earliest efforts before the possible demonstration, would have been mocked by a scientific center into discouragement and silence. The inception of revolutionary discoveries seems possible only to the isolated worker who ignores and defies skepticism, and who is independent of cooperative assistance. A Koch, a Pasteur, and a Lister would never have been known if their primal theories had required for elucidation the approval of some directing scientist clothed with autocratic powers. Hence, it was maintained—and correctly, I believe—that centralized research would retard if not give the death-blow to original individual efforts, unless they accorded with the "menu" of research in the central office. It is not held, I desire to emphasize, that such untoward conditions necessarily ensue upon centralization, but human tendencies are universally alike and the laws of action require an exception if results other than those described are realized. My observation, at least, of the short experience with centralized research in New York sustains the claim that the State Hospital Laboratory will cease to be a coadjutor of the central laboratory, as first designed, unless cooperation is made a requirement by the Commission.

In the fifth annual report of the Commission, for 1893, the subject of a pathologist is referred to in the following words: "The Commission would recur to the importance and desirability of

technical work of a central laboratory may produce some beautiful results, as a fruit of exquisite technic, but conclusions based thereon will be thoroughly worthless, except in a combined study of the clinical aspect of the case. The physician who studies the cause and indications of disease from frequent observation of the patient is the only competent person to reach conclusions from the morbid anatomy that will be of any value to the human race. . . . In the functions of chemistry, bacteriology, and microscopy, applied to clinical examination a central laboratory can give no aid except as an instructor. It is doubtful whether a central laboratory will be useful, except as a coadjutor to the hospital laboratory; and it is better to maintain the latter in a state of efficiency, increase the medical force sufficiently to permit a greater measure of pathological work, and keep the several departments of disease research together."

"Peter M. Wise, M.D., Medical Superintendent."

appointing an experienced and competent pathologist who should act for all the hospitals of the State. . . . The Commission now has under advisement a proposition for the appointment of such a pathologist as soon as his selection and the arrangements for a suitable laboratory can be determined upon."

The discussion by the State Hospital Superintendents of the action contemplated by the Commission resulted, finally, in a united sentiment which was expressed in a resolution assenting to and approving of "the appointment of a pathologist of recognized reputation and qualifications, to be located in the city of New York, and preferably to be a teacher of pathology, the expenses to be borne by equal monthly payments from the funds of the several State Hospitals."

In the sixth annual report of the Commission, for 1894, it recommended "that provision be made for the establishment and maintenance of a pathological laboratory or institute, under the direction of an accredited and competent pathologist, which shall be a department of the State Hospital system, to be maintained primarily for the State Hospitals, but incidentally for the benefit of all the institutions for the insane, as well as for such members of the medical profession at large, especially alienists and neurologists, as may desire under proper restrictions to avail themselves of its facilities in their investigations of the anatomy, physiology and pathology of the brain and nervous system." It will be observed that the Commission had in view primarily the benefit of the State Hospitals. The laboratory was also to open its doors to all members of the profession desiring to avail themselves of its facilities. This was thoroughly impracticable as might well have been foreseen, for it gave an opportunity to divert the use of the laboratory to personal expedients. The director was fully justified in ignoring this proposed function.

In the report for 1895, the Commission announced the creation by statute of the "Pathological Institute of the State Hospitals," to be located in the city of New York, for the reason that besides being a medical center, there was located within a radius of sixty miles more than two-thirds of the insane in the State. It repeats the declaration that the Institute is established primarily for the benefit of the State Hospitals and "also to provide instruction in brain pathology and allied subjects for the medical officers of the State Hospitals, and to other members of the medical profession who may desire to avail themselves of the advantages afforded by this department."

During the year 1896, the Institute was located in the Metropolitan Life Insurance Building on Madison Square, and occupying fully the front two-thirds of the sixth story at an annual rental of more than six thousand dollars. The contention was that the location most central to the general hospitals, having an abundance of unobscured light, and sufficiently cool to permit work to proceed continually during the hot season was

essential. In the following report (for 1896) the Commission announces the equipment and organization of the Institute, and sufficient progress "to demonstrate the wisdom of centralizing in one department the scientific investigations of all the hospitals in the yet obscure fields of pathology and causation of insanity." It is also here announced for the first time that the Institute is not to be confined to the study of pathology to problems of insanity exclusively, but that investigation was to be comprehensive and unite all the branches of science which could be brought to bear upon the scientific study of mental disease. The Institute therefore established the departments of normal histology, pathological histology, cellular biology, bacteriology, physiological chemistry, psychology, anthropology and comparative neurology, and the persons in charge of these several departments were known as associates, the whole being under the supervision of the director. There was also an associate who directly assisted the director in the administration of the Institute and a corps of lay employees, known as librarian, archivist, preparator, indexer, accountant, stenographer, janitor and janitress, several having assistants. The expense of maintenance for one full year, exclusive of equipment, but including rentals, approximated forty thousand dollars.¹ The attention of legislative committees having the preparation of appropriation bills was directed to the expenditures for the Institute by the financial statement required of the Commission. Fortunately, until 1899, the appropriation for the State Care of the Insane had been made by a direct tax on the people, collected as other State taxes, and the resultant was at the disposal of the Commission, under certain statutory restrictions. In 1899 this was changed to a definite appropriation included in the general tax levy, and precise sums were appropriated for the specific purposes of the department. In this appropriation, and in spite of the earnest protest of the President of the Commission, a definite sum was named for the Institute, although quite sufficient for its purposes. To obtain this, it was necessary for the Commissioner to appear before the respective committees of the Legislature, and state with all the solemnity of an oath and upon his honor as an upright public servant that the amount asked for was requisite, that no further economies were possible, that the Institute was being conducted solely in accord with the purposes of its creation, and that the Commission vouched for the proper and most economical expenditure of the moneys. The question being wholly a professional one, the lay commissioners turned the responsibility over to the medical commissioner, as a matter upon which they were incapable of judging. There are certain periods in man's experience where ignorance is bliss unalloyed.

It is not my intention to criticise the development or the administration of the Pathological Institute. I should be pleased to see its scope widened beyond the present, and comprehensive

¹ The appropriation for the year 1899 was thirty-six thousand dollars.

enough to apply all the sciences to the great purpose in view; but I am constrained to hesitate when the burden of State care is overburdened to carry on in a proper manner the elementary needs of the insane, to recommend its increase by the addition of scientific research not pertinent in a broad sense to that department of charity. During the summer of 1899, the Institute was practically vacated for the three hot months, and although the professional element of the organization may have continued research elsewhere, it was an incident which excited inquiry and criticism, in great part directed at that Commissioner who vouched for the economical expenditure of the appropriation. The Director was appealed to for an explanation and thenceforward until the present moment a constant effort has been sustained to determine how far and in what manner and to what purpose is the State justified in maintaining scientific institutions. If the Institute was created primarily for the benefit of the State Hospitals, it has failed in its purpose, for the State Hospitals have been a small element in its consideration, and for reasons promulgated by the director, in an exposition of the methods of research commended by him.¹ He has set forth many truths in a brilliant manner, but he has failed to take into full account the worth of clinical methods and their union with pathological research; and this is the criticism from the hospitals. The critics in the profession at large are numerous, but one class can be cancelled as having personal ends to serve. Others complain of the Institute as a close corporation, although maintained by the people for the people. They want a manifestation of the educational feature which was announced upon its establishment.

After a serious and painstaking consideration of the several matters which seemed to form a proper basis for inquiry, the Commission invited Dr. Edward Cowles and Dr. G. Alder Blumer (member of this Association) and Dr. Councilman of Harvard University to examine the scope and methods of the Institute, and report as to their value, the justification of the department of insanity in maintaining so comprehensive a scheme of research and the degree in which the present development of the Institute realizes the purposes of its creation. The questions submitted to this committee embodied the criticisms by the medical profession which were current during the past two years or more.

The speaker represents the unanimous sentiment of the Commission in stating that the sole motive actuating it in the inquiries thus far made to formulate a basis of justifiable procedure for the Institute, is the enhancement of the purposes for which the Institute was established—the spirit of the organic law—and to mark the border lines of "correlation" with the allied sciences, beyond which the State or at least the department of insanity should not go. Any other motive is for-

eign to the Commission, and any other claim is baseless. In the face of a determined opposition in the last legislature to cut out the appropriation entirely, the Commission made as strong an appeal as it was possible to make, or ever has offered, for the continuance of the Institute; but only partially succeeded, by receiving an appropriation of twenty thousand dollars, and even this is hampered by an embarrassing provision which prohibits any expenditure for rents. I was informed by the chairman of one of the legislative committees, that the arguments offered by the nearer representatives of the Institute, were almost sufficient to defeat the appropriation. The ordinary legislator is not capable of appreciating scientific arguments, and are better moved by personal assurances of supervising officials. Preachers of science are quite out of place in legislative halls.

There can be no denial that the Pathological Institute has accomplished some excellent work, and has in course of inquiry questions of prime importance to psychopathology. It is to be regretted that all research it has instituted cannot go on to completion, even should it call for the application of labor and material not in the jurisdiction of the department. The question is evidently not whether the investigations of the Institute are of value, but whether it is properly maintained by the State, and especially by the lunacy department. Furthermore, whether it is accomplishing all the functions for which it was created. The Commission has been convinced by the most trustworthy authority, that these questions bear a negative phase that calls for early and radical changes in policy. It is sincerely to be hoped that the present organization may be modified by cooperation of the director to harmonize with the convictions of the Commission and continue the more valuable researches in progress to the greatest possible degree; but that remains an open question. The teaching function should become a greater feature, a prime feature, perhaps. It is the conception of a Commissioner that the work of the Institute might be prosecuted in two departments, although under one director—*teaching* and *research*—each of which should be conducted by an experienced physician preeminently qualified.

The report of the Committee which served the Commission as well as the Institute, in its impartial investigation of the latter, is appended herewith (Exhibit A), but the time allotted for this paper does not allow reading it without a suspension of the rules. This report shows with what care all issues involved both in inception and development were considered, and the Committee has rendered an excellent service to the department, to the State and to science. For the scientific world is watching the experiment undertaken by New York, and abnormal tendencies would surely disrupt it in time; so that any effort which aids in restoring the Institute to a normal or appropriate standard, renders an invaluable service to science.

¹"Correlation of Sciences in the Investigation of Nervous and Mental Diseases." Archives of Neurology and Psychopathology, Vol. I., 1900; by Ira Van Gieson, M.D.

I regret that it is not possible to announce at the present time the final determination of the Commission. It has endeavored to cooperate with the Director to conform the future of the Institute to the funds available, and the requirements of the service, scope and organization which in gross have been determined by the late inquiry but thus far without avail. A pathological department for the State Hospitals which is not administered in harmony with the State Hospitals, and subject in some degree to their respective requirements as interpreted by their Superintendents, is quite impossible as well as inappropriate. If the State desires to maintain a department of pure science, for science only, the medical profession in New York will cry Godspeed in one voice, and loudest of all the psychiatrists, but for the sake of all peaceful principles it should not burden the harmonious, hard-worked, conscientious and methodical lunacy department with it.

Exhibit A.

NEW YORK, February 5, 1900.

To the State Commission in Lunacy,
Albany, N. Y.

Gentlemen:—Pursuant to appointment by the State Commission in Lunacy, your Committee to report on the work and scope of the Pathological Institute of the New York State Hospitals met in New York City on February 3, 4 and 5, 1900.

Your Committee began its work by considering the history of the Institute, as contained in the reports of the Lunacy Commission and elsewhere, to the end not only that it should fully apprehend the purpose of the Legislature and the Commission in its foundation, but that it should also determine the degree to which the Institute had departed from that original and avowed purpose. It seems clear from the recommendation of the Commission in its Third Annual Report, for 1891, p. 272, that "a special pathologist for the use of all the State Hospitals" be appointed; and from that of the Sixth Annual Report, for 1893-4, p. 58, that the State should establish and maintain "a pathological laboratory or institute, under the direction of an accredited and competent pathologist which shall be maintained primarily for the State Hospitals;" and from the further suggestion in the Seventh Annual Report, for 1894-5, p. 104, that the proposed department of the State hospital system should "provide instruction in brain pathology and other subjects for the medical officers of the State Hospitals;" it seems clear to your Committee that the intent of the Commission was that the Institute should be a handmaid of the hospitals and subserve their needs in all matters pertaining to the scientific aspects of the work, especially in the domain of pathology and pathological anatomy in close alliance with clinical observation and research.

Your committee appreciates the fact that the Institute in the organization of its work must necessarily have been given freedom to develop gradually, and experimentally in some respects;

but, while recognizing the excellent quality of much of the work that has been done, which has received high and authoritative commendation, the committee thinks that the Institute has failed to fulfil the specific purpose for which it was established. Instead of undertaking the problems of mental pathology, in practical conjunction with the several hospitals, it has widened the field of its operations on the basis of the federation of the medical and biological sciences under the leadership of psychology. It has given too great prominence, in thus occupying the debatable ground of speculation, to the deduction of theories rather than to the study of the facts of science, on the principle that the work of the psychologist can explain living phenomena better than the pathological anatomist provided the psychologist has the general knowledge of the medical sciences. Your Committee approves academically of the correlation of the sciences, but believes that the attempt thus to correlate them is a departure from the function of the Pathological Institute.

It is the opinion of the Committee that the failure, from the point of view of the State Hospitals, has been due to too great diffusion of effort, whereas the aim from the beginning should have been to establish closer relations between the clinical and pathological aspects of the work. In a word, the function of the Pathological Institute of the State Hospitals is not the correlation of sciences but rather the correlation of the clinical needs of the physician with science. No estimate of these needs can leave out of consideration the duty of the State of New York to make adequate provision for instruction of the highest order for those who are called upon to minister to the insane, her dependent wards. As the State in its wisdom has taken wholly under its charge the care of the insane, their treatment and the use of clinical opportunities, these latter should be utilized in training to the fullest possible extent. The data of the Hospitals is the material upon which the Institute should do its work. It seems to your committee that it cannot be too strongly insisted upon that the teaching function of the Institute must ever be its warrant for existence and a generous State support. Research work upon the problems of insanity would naturally follow the carrying out of proper methods of instruction and cannot be successfully pursued without it.

The present Institute, your Committee believes, has taught methods not matter. If as a laboratory it had given the physicians in the service the opportunity to obtain accurate knowledge of the nervous system, the necessity for expansion would have been felt more and more in the direction of the clinical study of insanity. Such facilities could be better afforded in a central laboratory that should be in a closer contact with a State Hospital than is possible in its present location; they should include short systematic courses of instruction to small classes of officers from the medical service, detailed in turn for this purpose from time to time, with the subsequent guidance of their work in the Hospitals. Such an arrange-

ment would permit an appropriate coordination of the clinical with the various other problems, pathological, psychological, physiological, chemical, etc., that present themselves for solution, and thus furnish the natural stimulus to scientific work and promote the steady growth of a professional spirit. It is believed that, under competent guidance, such a laboratory, if it were connected with a small hospital to provide a sufficient variety of cases of insanity, would become a school of clinical psychiatry that would ultimately fulfil the great purpose that the Legislature and the Commission had in view in establishing the present Institute. Your Committee would therefore summarize its conclusions as follows:

1. The Pathological Institute should be maintained, but reorganized on a basis that shall have systematic teaching as its main function.

2. It should teach the fundamental principles whose study and application must lead to the clinical, anatomical and chemical research necessary for advancement in the curative and preventive treatment of insanity.

3. It should have as its director a physician who has had a training in clinical psychiatry, besides being a competent pathologist.

4. It should be located on property of the State, in a building of its own, as near to the metropolitan medical schools as is practicable.

5. As an essential of its teaching function its building should adjoin, or be a part of, a small hospital for the insane for the reception of acute cases and others appropriate for investigation.

6. Entrance into the medical service of the State Hospitals should be conditioned upon previous training in the Pathological Institute.

Respectfully submitted,

(Signed)

EDWARD COWLES.

WM. T. COUNCILMAN.

G. ALDER BLUMER.

CLINICAL MEMORANDA.

HIP-JOINT AMPUTATION.

By WM. D. HAMILTON, M.D.,
OF COLUMBUS, OHIO.

THIS paper describes five cases in which Wyeth's bloodless method of hip-joint amputation was used. Three of them were done by the writer, with one death and two recoveries. The other two patients were operated upon by my colleague, Dr. Chas. S. Hamilton, and both recovered. Of the last two, one had had a thigh amputation done by the writer, with early recurrence. The other case is of unusual interest and is cited in this connection for that reason.

Case I.—Mrs. I. E., forty-eight years of age, was seen with her physician, Dr. Aiken, at her home in Gallia County. She had had for the previous thirteen years a growth, involving the left knee

and the lower part of the thigh. It had been pronounced sarcoma by two prominent surgeons of Cincinnati, who had advised amputation years ago, when she consulted them. Growth had progressed rapidly during the last year. Pain in the hip and knee had been severe. No evidences of tuberculosis were present in the patient or in her family history. There was not any history of traumatism. She had been crippled for several years. During the previous six weeks she had been confined to bed, and had become very anemic and feeble. Her extreme pallor and cachectic appearance suggested the possibility of deposits elsewhere. But metastases could not be found. The growth was fusiform in shape, eighteen and a half inches in circumference, and involved the knee and the thigh throughout most of its extent. Wyeth's method was employed August 8, 1895, at her home. After the operation was completed the pulse was 140 and weak. The femur, much softened, was found to be involved in a malignant neoplasm as far as the trochanter major. The patient died of shock five hours later in spite of the stimulation and the usual methods employed under such circumstances. The growth was sarcomatous.

Case II.—A. B., a carpenter by occupation, a resident of Columbus, was sent to Hawkes Hospital by his physician, Dr. Benjamin Lippett. He was fifty-six years of age. Seven years prior to his admission, he had fallen down stairs and an injury to the thigh had resulted. Pain, disability and swelling had been very marked. The patient had attributed the tumor to this traumatism. While its progress had been very rapid during the three years prior to his admission, it had been especially so during the last three months. It extended from just above the knee so close to the hip as to leave very little healthy tissue below the articulation. It was rather firm to the touch, irregular in outline and was more apparent from behind than in front. The left thigh was twice as large as the right one. The malignant character of the tumor having been suspected, an exploratory incision was made under ether, April 14, 1899, when it was shown to be a sarcoma. Furthermore, it was found to have infiltrated the thigh so extensively that a hip-joint amputation was the only practicable expedient. This was accordingly done and he bore it well. There was practically no hemorrhage or shock. The wound was closed without drainage and he was discharged well in three weeks. There has been no recurrence.

Case III.—Miss W., aged sixteen years, of Washington Court-House, Fayette County, Ohio, was seen with the Drs. Ireland at her home, February 14, 1900. Her grandfather had died of cancer of the lip. A tumor of the left thigh had been rapidly developing during the past six months. While at school, in the summer of 1898, she had struck her thigh against a desk and some swelling and lameness had followed. Severe pain was at times present. The growth enlarged the thigh

¹ Read before the Ohio State Medical Society, May 11, 1900.

to a point very near the hip-joint, having ascended higher on the outer than on the inner side of the extremity. Its malignant character had been suspected by her attending physicians. February 8, 1900, an exploratory incision into the growth showed its sarcomatous character and demonstrated that hip-joint amputation was necessary. This was done with a trifling amount of hemorrhage, but with some shock. A drain was employed and four hemostatic clamps were left in the wound, so inaccessible were certain deep vessels which did not readily admit of ligatures. Her convalescence has been quite satisfactory, and she now walks about on crutches. Her stoutness made neat coaptation difficult, and retarded the healing process.

Case IV.—T. S., of Columbus, aged fourteen years, had been under observation since childhood for tuberculous osteomyelitis of the femur with sinuses. There were five children in the family of the patient, and he was the only member of it who was affected with tuberculosis. Incision, curettage of the sinuses, iodoform injections and tonics had been tried in vain. He had the waxy pallor which is often observable in sufferers from old tuberculous arthritis. He had persistent hectic and an abundance of albumin and casts in the urine, which was of low specific gravity. In spite of these unfavorable facts, he was subjected to hip amputation under ether at the Children's Hospital on November 27, 1899, by Dr. Charles S. Hamilton. Silk ligatures were used. He made a good recovery and is well to-day. The interesting fact is that prolonged suppuration, albumin, casts, low specific gravity of urine, profound anemia, with amyloid visceral changes, seemed to contraindicate amputation. It was done, however, with a full realization of the gravity of the situation. He is now well.

Case V.—Mrs. W. C. B., aged thirty-two years, of Columbus. Had been married eight years and had borne two children. No cases of malignant disease were found in the family history. At the age of seven years a mass as large as a hickory-nut was felt by her in the center of the calf of the left leg. The neoplasm grew steadily for twenty-four years, but within the previous few months it had progressed rapidly, so that the circumference of the middle of the leg was nearly twice as great as that of the other. The tumor, which pulsed distinctly, reached nearly to the knee, and a distinct bruit could be heard over most portions of it. There was some pain, but only within the past few weeks had locomotion been impaired. She was admitted to Hawkes Hospital and was etherized for exploration October 20, 1899. The malignant character of the growth was evident on section, and the thigh was amputated below its middle by the writer. Recurrence in the stump appeared within four weeks, necessitating amputation at the hip-joint, which was performed by Dr. Chas. S. Hamilton November 24, 1899. She convalesced rapidly, has since borne a healthy child, and is well to-day.

There is no doubt as to the great value of Wyeth's bloodless method where it is applicable. A well-appointed hospital is the proper place for its performance. There, too, shock can be more successfully combated, in case it should occur.

STUMP PREGNANCY.¹

By JOHN C. MORFIT, M.D.,
OF ST. LOUIS, MO.

IN August, 1897, M. A., aged twenty-three years, produced on herself an instrumental abortion. She was a working-girl in a department store, and to cover up suspicion had not remained away from her duties, but endured the pain while on her feet for a large portion of many days. This was the second experience of the kind she had had. She was referred to me the latter half of August, 1897. There were all the symptoms of pelvic inflammation; fever of a remittent type, pain and tenderness, especially in the lower abdomen, exaggerated on exertion or palpation. There was constipation and distention. There was, also, a muco-purulent vaginal discharge, very abundant, but not showing any gonococci—only the ordinary pus-producing organisms. The womb was soft, somewhat enlarged, very tender and red. In the cul-de-sac to the right a mass about as big as a hen's-egg could be detected, this was elastic, but did not fluctuate. The left ovary and tube could be felt, but were not pathologic. The mass on the right, I took to be a pyosalpinx, resulting from an infection incident to the criminal abortion.

Operation was decided on. The tube and ovary were removed, and about an ounce of pus escaped from the distorted and distended tube. At the time, I did not notice how far from the uterus I applied my ligature. Recovery was uneventful and rapid. The woman gained her accustomed robust health, except for the necessity of removing, six months after, one of the interrupted buried silkwormgut sutures, which was used to unite the fascia. This is a practice I have discarded, having substituted cumol catgut as a suture, and from which I have never experienced bad results in a considerable number of cases.

December 17, 1899, two years and four months later, I was called in the evening to see this same patient. She had a weak, thready pulse that I could not count; seemed worried; the lips were pale, the hands and feet cold, respiration quick and shallow with nostrils dilating at each respiratory excursion. She told me in slowly spoken words, that she had been two weeks overdue in her period and believed she was pregnant. She complained of the most intense pain in the right side from the shoulder to the hip, with especial reference to the right iliac region. She was so weak, nervous and excited that I did not make any attempt to examine thoroughly. There was

¹ Read before the Tri-State Medical Society of Iowa, Illinois and Missouri, April 3, 1900.

no mistaking hemorrhage, however, with such symptoms. I gave three-eighths of a grain of morphine and one-thirtieth of strychnine, hypodermically, and in half an hour, injected a quart of salt solution into the rectum. This was retained and the pulse soon became steady and was 120; the temperature was below normal. As she was quiet and calm, I left her and returned early in the morning. At this time I was able with less difficulty, but not without causing the patient considerable pain, to examine the abdomen, which was much distended, and tympanitic except low down posteriorly at the sides, where there was bulging and dulness. The pulse was now 110 and much stronger than on the previous evening, but the patient was too weak to stand anything and was kept at absolute rest. I repeated the salt solution per rectum and encouraged the patient to drink all the liquid possible. Her great thirst made her comply frequently. I then left her to prepare for operation, and arrange for her to be carried on a stretcher to a nearby hospital. Before I could barely inaugurate my plans, I was recalled and found the sufferer in a state of profound collapse. There was absolutely no radial pulse and that of the carotids was only perceptible. Listening over the heart, I could hear only a continuous whir, no well-defined beat interval could be detected. The patient was stupid and responded to questions in an indifferent manner. I had concluded from the first that this was a case of ectopic pregnancy and this second collapse was no doubt due to a recurring hemorrhage. At both times the woman's condition was such as to preclude the thought of an immediate operation. I could only hope to get her in condition where she could be taken to more favorable surroundings and anesthetized. Much to my gratification, I was able to get a favorable response to another quart of salt solution per rectum, and brandy, strychnine, nitroglycerine and morphine hypodermically.

By the next day at noon, or thirty-six hours after my first visit, I had her in the hospital, where she arrived with a pulse of 108, weak and thready, temperature 97° F. A pint of normal salt solution was immediately injected under each breast into the loose pectoral tissue. The same fluid was administered by the rectum, but not retained. Fortunately there was no vomiting, and the patient took a considerable quantity of fluid by the mouth. Pain was complained of and morphine and the heart stimulants were administered freely by the hypodermic method. At 8 A. M. of the second day in the hospital the pulse was 150, weak and compressible, and the temperature at the same time was 101° F. Both remained at this point, but the pulse became stronger and the pain greater in the afternoon. The pain and tenderness were now confined to the right iliac region and were most acute. The other abdominal symptoms were somewhat intensified.

At 5 P. M. I decided to risk an operation, al-

though I had little hope of bringing the patient off the table alive. I made the incision in approximately the same line of the first operation of two years previously, and encountered several embedded silkwormgut sutures. There was a band of adhesion running from the median line outward and backward to the fundus of the cecum, just to where the vermiform appendix is given off. This two inches of adhesion resembled a thread of catgut.

I only noticed this incidentally. My first object, of course, being to find the bleeding-point and stop the hemorrhage. Hindsight being sometimes better than foresight, I recall that I endeavored to stop the hemorrhage and then found the bleeding-point. The belly was full of black, but sweet-smelling clots, and there was quite a quantity of fluid red blood. Knowing that I had at one time removed the right appendages, I sought the left adnexa, and felt my way through the clots, and applied a forceps to the proximate portion of the left broad ligament. With this pressure, I felt at ease to proceed to the toilet of the belly, and must have removed more than a gallon of clots and fluid blood. What was my surprise, on getting a clear field, to see that the oozing was from the stump of my old operation. There it was, about three-fourths of an inch long, and ruptured, presenting a fuzzy placenta to my view. Another forceps was applied to the right side, both tubes ligated close to the womb, and the distal portions removed. The abdomen was then filled with normal saline solution and sewed up with several layers of buried catgut sutures. The patient was returned to bed, and everything done to sustain strength and lessen the shock. Artificial respiration was kept up for over two hours, salt solution was injected per rectum, under the breasts, and into the cellular tissue of the thighs. Twenty hypodermic syringe-loads of brandy, besides strychnine and nitroglycerine were administered. For many hours the patient seemed to be only artificially alive, but our persistent efforts were finally rewarded by a gradual return of consciousness, and more emphatic evidences of real life. In four weeks the patient walked to her carriage and was driven home. Her recovery would have been perfect, except for the annoyance caused by her burning her legs with hot-water bottles. To-day she is a picture of perfect health and suffers none. In the ovary removed there was a large ruptured Graafian follicle.

This, I believe, is a variety of extra-uterine pregnancy which has never before been met with, and for that reason, I have named it *stump pregnancy*, it having occurred in the remains of a tube, the proximal end of which I had not entirely removed. The absence of the ovary and most of the tube on the right side, the occlusion by ligature of the stump, the presence of a normal ovary and tube on the left side, and a large corpus luteum being present in the only ovary, lead to but one possible conclusion. The fertilized ovum came from the left side, passed

through the left tube and the uterine cavity up into the remains of the tube on the right side, where it began to develop and finally ruptured the tube into the abdomen.

This upsets the theory, and heretofore generally accepted view, that ectopic pregnancy is due to some mechanical or inflammatory hindrance to the normal downward passage of the fertilized ovum. I believe this case proves quite clearly that the ovum may travel either down or up, or down and up, and, wherever an ovum may be fertilized in the ovary tube or uterus, it seems certain that it can come from either side and go everywhere and anywhere before anchoring itself preparatory to development.

3335 Olive Street.

MEDICAL PROGRESS.

Gonorrhea in the Female.—In the female the most vulnerable parts, says William Gardner, (*Montreal Med. Jour.*, April, 1900), are the urethra, the fundus of the vagina, and the cervical canal. In no part of the genital tract do the gonococci penetrate beneath the epithelial layer, and this is least resistant in the child and senile woman. Pelvic aching, scalding of the genitals, and profuse, fetid, purulent discharge are suspicious. On examination the orifice of the urethra is swollen, red and pouting; if the discharge is not evident, pressure in the vagina on the urethra from within outward will reveal it. The vagina will often appear quite healthy when Skene's tubules, the ducts of Bartholin's glands, and the cervical canal are infected, but this combination is sufficient to establish the diagnosis. For clinical purposes the discharge may be spread upon a slide and stained with methylene blue, after being fixed by heating for a few seconds. To be certain of the diagnosis the biscuit-shaped cocci must be found in pairs inside the pus-cells. When the uterine body is involved it is bulkier, firmer, and more tender than normal, and it gives out a thin purulent discharge. The commonest complications are extension to tubes or ovaries; very uncommon is a cystitis or pyelitis. In the acute stage, rest in bed, bland diet, warm hip-baths, saline purgatives, and frequent soothing irrigation of the genitals, as by linseed tea, may be employed. In the chronic stage have a vaginal douche administered in the dorsal position, using 1-5000 permanganate of potash, bichloride of mercury, or formaldehyde, followed by a small quantity of warm water. With the patient in Sims' position, through a Sims speculum, apply a twenty- to sixty-grain solution of silver nitrate by a swab with pressure until every part is whitened. Follow this by a tampon of five-per-cent. ichthyol-glycerin. The urethra and cervical canal are best treated by instillation of Skene's tubules and the ducts of Bartholin's glands by injection of the solutions with a slender-nozzled syringe. In the uterine cavity local treatment must be avoided. In affections

of the tubes and ovaries, many get well with long rest in bed, good nursing, and symptomatic treatment; and if operation be inevitable, the longer the interval since the acute symptoms have subsided, the more favorable will be the course of the case.

Modern Dietetic Preparations.—Whenever anorexia exists or deglutition is rendered difficult, owing to stomatitis or diminished saliva or to the presence of functional or organic disease of the alimentary tract, the use of artificial food preparations is indicated. On account of the increasing number put on the market, J. Marcuse (*Therap. Monatshft.*, May, 1900) finds it advisable to indicate the value of the most important ones. Perhaps the first preparation was Liebig's extract, but this, owing to the high percentage of extractives and mineral salts, is more stimulating than nutritive. Of meat-juices, Valentine's is too expensive and contains but five per cent. albumin in comparison with Puro which contains thirty-one per cent. Most other meat-juices are of little value. Peptone preparations were next advocated, but, since physiology has shown that they are of no more value than ordinary albumin, their use has become more and more restricted, especially since, when long continued, the peptone will irritate the mucous membrane. Somatose, with its fifty-one per cent. of albumose, was then expected to solve the problem, but the entire absence of extractives and the development of diarrhea, vomiting and even loss of weight after prolonged use, have disillusioned all enthusiasts. A step in the proper direction was taken when the value of phosphorous containing proteids was appreciated. Casein may be considered the type of these and is the base of eucasin, nutrose, samose, sanotogen, plasmon, eulactol and others, which, besides their cheapness and high concentration, are readily soluble and almost tasteless. Other valuable preparations, among which may be mentioned mutase, tropon and aleuronat, contain vegetable proteid. In conclusion, the author points out that the importance of albumin in foods is generally overestimated, since but two ounces daily are needed if carbohydrates and fats are present in sufficient amount. Another mistake that is frequently made is that the importance of water and salts as integral parts of food is often underrated.

Treatment of Gastric Ulcer.—The mortality of gastric ulcer has been lessened by appropriate treatment from about fifty per cent., as estimated by Bimton, down to about ten per cent. at the present time. B. Reed (*Internat. Med. Mag.*, May, 1900) suggests that in every case showing marked hydrochloric-acid excess, the danger of ulcer should be appreciated and the condition treated and subsequently guarded against. The indications to be met in the cure of the disease are (1) to put the stomach at complete rest; (2) to reduce the hyperchlorhydria; (3) to allay the pain and vomiting; (4) to preclude or arrest hemorrhage. The patient should be kept in bed

for three weeks at least and for one week fed exclusively per rectum. Hot poultices or compresses may also be used over the epigastrium. A clyster of salt and water should be used as a cleansing agent before the nutrient enemas are administered. These may be given two to four times a day, and need not consist of predigested food, the following being very efficacious at times; good fresh milk, freshly expressed beef-juice, raw eggs, solutions of sugar and also of very thoroughly cooked starch. A pint of salt should be added to each enema. Ewald recommends two to three eggs beaten up with a tablespoonful of cold water, then a tablespoonful of prepared cereal, dextrinized by heat, is boiled with a half tumblerful of twenty-per-cent. solution of grape-sugar and a wine-glassful of claret added. When lukewarm, stir in the eggs and add fifteen grains of salt. When the contents of the bowel become acid beef-tea should be given instead of milk and the sugar. Feeding by mouth should be begun with milk and lime-water, equal parts, giving at first a tablespoonful every half-hour and then increasing the quantity and the length of intervals. Barley-water, lightly boiled or poached eggs, slightly salted, and calf's-food jelly may be slowly added to the regimen. Vomiting may be relieved by pellets of ice and extreme thirst should be allayed by frequent sippings of cool water. Persistent pain and burning is usually due to excess of hydrochloric acid and is relieved by half- to one-dram doses of sodium bicarbonate. In stubborn cases forty to sixty grains of bismuth subnitrate in a draught of water may be given one hour before each feeding. When constipation results it is best relieved by enemata of olive oil. Hematemesis seldom occurs when on such treatment, but when it does appear the patient is immediately put to bed, an ice-bag applied to the epigastrium, and ice given by mouth. Ewald records having checked hemorrhage by washing the stomach out with ice-water, but this is very dangerous. Large doses of bismuth in lime-water, with one drop of carbolic acid and flavored with spirits of chloroform and compound tincture of cardamon, are often very valuable.

Therapy of Anthrax.—Contrary to some clinicians who advise expectant treatment in true carbuncle, A. Strubell (*Munch. med. Woch.*, May 8, 1900) recommends energetic measures, consisting in the application of very hot poultices (up to 145° F.) to the local lesion and the injection of a three-per-cent. solution of carbolic acid into the gangrenous tissue. Bacteriological examinations showed a gradual disappearance of the bacteria in the tissues with above methods. The patients can readily stand the high degrees of heat, owing to anesthesia, and carboloria does not follow.

Roentgen Rays in Aneurisms.—G. Kirchgaesser (*Munch. med. Woch.*, May 8, 1900) speaks well of the value of the fluoroscope in diagnosing aneurisms of the aorta. The aneurisms usually throw a shadow beside the heart which

can be seen to enlarge in all directions with each heart-beat. This picture must not, however, be regarded as pathognomonic, for, in a case examined by the author in which the shadow was well-defined and the pulsation marked, the post-mortem examination disclosed the presence of carcinoma of the cardia with extreme dilatation of the esophagus above, thus simulating aneurism. It is, therefore, desirable not to rely too much on the Roentgen-test, especially when the physical signs are poorly developed.

Vaccination and Variola in Pregnancy.—In vaccinating pregnant women M. Ch. Vinay (*Gaz. Hebdomadaire de Med. et de Chirurg.*, May 3, 1900) points out the greater predisposition of these patients to infectious diseases in general and recommends great caution, especially when the operation is to be done upon the legs where the venous congestion may lead to a rapid spreading of any complicating infection. The protection afforded by the vaccination will also extend to the infant.

Dysmenorrhea Membranacea.—The following conclusions are given by Kollmann (*Wiener klin. Rundschau*, April 29, 1900) as having been arrived at in his experience as gynecologist regarding dysmenorrhea membranacea: (1) Membranous dysmenorrhea has no connection or dependence upon pregnancy or abortion. (2) It does not necessarily cause sterility. (3) It may end in spontaneous cure. (4) The dysmenorrheic membranes have nothing to do with inflammation of the uterine mucosa. (5) The fibrinous membranes are to be regarded purely as dysmenorrheic in character. (6) Unless examined closely these may be mistaken for blood-coagula or for the products of a croupous inflammation. (7) These fibrinous membranes are produced by a necrosis due to hemorrhage and exudation into the connective tissue of the uterus.

Symptomatology of Pleural Endothelioma.—Although recent advances in pathology have made it probable that endotheliomata are to be classified among epitheliomatous growths, the clinical history of the patients is often not so definite and, therefore, the diagnosis is not always possible. An interesting case is cited by A. Schultze-Vellinghausen (*Munch. med. Woch.*, May 8, 1900). He states that the diagnosis is generally made only in the advanced stages of the disease. A hemorrhagic fluid obtained by aspiration is, perhaps, the most constant and valuable sign, for, although this also occurs in phthisis, the absence of confirmatory evidences of phthisis and, more particularly, the large amount of the fluid and the rapid refilling of the pleura, speak for tumor. Large, polygonal cells in sheets, with large nuclei, are not rare in the fluid and can be distinguished from normal endothelial cells by applying a very dilute iodine solution, which in case of tumor, will color the cells brown. The sputum, too, may contain these cell-aggregations. Other valuable points are the de-

velopment of papillary excrescences over the puncture-holes and the sensation of increased resistance which is noted on penetrating the dense tissue into which the infiltrated pleura is converted. The irregularity of the area of flatness is also suggestive. On the other hand, the greater distention of the affected side of the chest; the displacement of the adjacent organs, pains, absence of fremitus and voice and breathing, afford no help. Concerning etiology but little can as yet be said, but it is significant that in many cases some trauma to the chest wall precedes the growth.

Advantages of Aspirin.—From a study of a large number of rheumatic cases, K. Manasse (*Therap. Monatshft.*, May, 1900) is inclined to decide favorably as to aspirin. In all the acute cases there has been a prompt disappearance of symptoms, while in the subacute or chronic cases the patients were always made more comfortable with this than with other drugs. Daily doses of 45-60 grains do not injure the heart or other viscera nor are nausea and tinnitus ever caused, although they almost invariably follow the prolonged use of the salicylates.

Natural Sulphur-Water in Gall-Stones.—A. Winckler (*Therap. Monatshft.*, May, 1900) speaks very highly of the power possessed by sulphur-waters to increase and dilute the bile and thinks that in this respect they greatly excel the alkaline springs. The patients may drink the water at home or, preferably, should spend a few weeks at some watering-place where strong sulphur-springs exist. The cure should be continued for some time after the expulsion of the stones. The author also draws attention to the excessive ingestion of eggs as a possible etiological factor in causing gall-stones, since the yolk contains as much as one-half per cent. of cholesterol. Bread, also, should be used with moderation.

Liver Abscess and Appendicitis.—E. Loison discusses this subject (*Révue de Chirurgie*, 1900, pp. 522). There are meager statistics on this point, the following being the only reliable data. Reginald Fitz in 257 appendicitis found 11 examples of suppurative phlebitis and hepatitis; Langheldt in 112 autopsies of appendicitis shows 4 cases of phlebitis and thrombosis, 2 of abscess of the liver, 2 of suppurative hepatitis, 2 of perihepatitis; Einhorn reports 100 appendicular post-mortem examinations and found 6 complicated by infectious embolism of the portal vein, accompanied by pyophlebitis and by secondary abscess of the liver; Coley among 200 cases of appendicitis notes 2 of the liver and 1 of subphrenic abscess. Scattered through literature are other isolated cases beginning with 1849, when apparently the first reported instance was given. The avenues of infection may be the biliary canals. There is one well-established case of this on record. The usual ways of involvement are along the hepatic artery, the portal vein, the lymphatic system, and, by direct contact the peritoneum or

retroperitoneal cellular planes. The arteries are the sources of deposit only as part of a general pyemia. The portal vein carries the germs directly in its current or as emboli following pyophlebitis with or without thrombosis. The lymphatics may connect immediately with those of the rest of the intestinal tract going to the liver, or by adhesions of the appendix with the parietes finally anastomose with the channels there and thus indirectly reach it. The pus may enter the mesentery of the appendix, burst through its base into the retrocecal cellular tissue and behind the colon in the retroperitoneal planes work upward. The causes of hepatic involvement are either unusual virulence of the germs or temporary depreciation of resistance, local and general. The ascent of the right lobe and fixation of the diaphragm as shown by the radioscope are excellent aids to definite diagnosis and often the site for exploratory puncture can be located. The prognosis is usually unfavorable in virtue of the combined appendicular and hepatic invasions. Multiple hepatic abscesses are almost always fatal. The prophylaxis is concerned with the early diagnosis and treatment of the appendicitis. Free evacuation and ample drainage of all the foci are the only treatment.

Trachoma.—Trachoma is such a common disease and its cure so difficult that the suggestions offered by N. B. Jenkins (*N. Y. Med. Jour.*, May 19, 1900) in regard to the cause and treatment of the condition are especially interesting. He believes that the probable cause of uncomplicated trachoma is chronic irritation or spasm of the ciliary muscle—accommodative asthenopia. This usually comes from errors of refraction, but it may be caused by excessive use of the eyes. Irritation or inflammation of the conjunctiva from filth, dust, or infection causes irritation or spasm of the ciliary muscle and trachoma may result. Trachoma is not especially contagious, but usually becomes complicated with infection and parasitism. It appears in several members of the same family oftentimes because its chief cause, ametropia, is hereditary. Irritation or spasm of the ciliary muscle from ametropia frequently affects an entire family, and may be caused by very low degrees of ametropia. Any inflammation or irritation of the conjunctiva may cause blepharospasm, which is probably a factor in trachoma since it causes friction and congestion of the eye and its appendages. Perfect rest will usually give relief to trachomatous eyes and is the chief indication in this condition. Instillations of atropine, together with the use of bandages or cataract shields during the day, are of great use. Before bandaging a weak iodoform ointment may be applied to conjunctivæ and lids. At night the protection should be removed and the patient kept in the dark. Properly-fitting glasses should be used when the eyes are not at rest. Massage is very beneficial and is practised every week or so by rubbing the granulations lightly with a strabismus hook. Trachoma for-

ceps destroy valuable tissue. The benefit derived from bluestone, alum and lunar caustic the author believes is due to the massage or the result of the rest the eyes receive on account of the pain induced.

Condition of Blood in Cancer of the Stomach.—

In carcinoma of the stomach the patient usually presents such a degree of anemia, and may even simulate so closely the appearance of a pernicious anemia, that the blood-examination becomes an important feature. W. Osler and T. McCrae (*N. Y. Med. Jour.*, May 19, 1900) have given the results of the examination of the blood in fifty-nine cases of cancer of the stomach. The average number of red corpuscles was 3,712,186 to the cubic millimeter, a high blood-count since many of the cases were far advanced or cachectic. There were only eight cases below 2,000,000 and only two had a count below 1,500,000. One of these last had a large ulcerated area. These figures are important in differentiating from pernicious anemia. T. P. Henry has well said that in stomach cancer the diminution in red corpuscles does not keep pace with the cachexia, while in pernicious anemia the cachexia holds no pace with the oligocythemia. He has never seen a fatal case of pernicious anemia in which the red corpuscles were not below 1,000,000. Improvement in the blood condition was not common under medication and this may be of diagnostic importance. On the other hand, no marked loss in the condition was seen. Poikilocytes and normoblasts were found in many of the severe cases, but in no instance was a typical megaloblast seen. In fifty-two cases the hemoglobin averaged 46.9, giving a color index of 0.63. Nearly all those cases with lowest records showed marked ulceration. An examination of the white blood-corpuscles gave very little information. Neither ulceration, nor the presence of metastases, nor the situation of the growth, nor the relation of the temperature seem to have any constant effect upon the number of leucocytes. Differential counts of leucocytes proved to be unimportant and no myelocytes were found. The absence of a digestion leucocytosis has been held to be suggestive of cancer of the stomach. In this series, an accurate record was obtained in twenty-two cases, of which ten showed the presence of digestive leucocytosis and, therefore, the presence or absence of this condition would appear too uncertain to be of any diagnostic value. In a few cases of cancer the sallow, lemon tint of the skin, so characteristic of progressive pernicious anemia, was present. The authors conclude that (1) in a doubtful case a blood-count below 1,000,000 red blood-corpuscles is strongly in favor of pernicious anemia; (2) while normoblasts are present in all severe cases of secondary anemia, megablasts rarely, if ever, occur in cancer of the stomach; (3) the number and kind of leucocytes present seem to be of no value in the diagnosis of this condition.

Operation in Uterine Cancer.—H. A. Kelly

(*Jour. Am. Med. Assoc.*, May 19, 1900) says that in every case of cancerous uterus the entire organ must be removed, and no partial operation can ever be justifiable. In all cases in which the uterine body is involved, the tubes also must be removed. On the vaginal side one must cut away at least one inch from the edge of the growth, for often the neoplasm extends under the vaginal mucosa without causing perceptible infiltration or change of color. Portions of the bladder and rectum must be sacrificed if necessary. Nearly all cases of bowel involvement are associated with extensive lateral involvement. Cervical cancer extends by contiguity. Glandular metastasis is unusual in the earlier operable stages. The results of operation are sufficiently good to justify operation. The old method of shelling out the uterus only, is most liable to be followed by a recurrence. It is of greatest importance to pass catheters into the ureters to mark them out clearly during operation. Dr. Kelly's favorite operation consists in the following steps: Thorough curettage; circular division of vagina one inch below the diseased area; separation of bladder from vagina up to the vesico-uterine fold, which is widely opened, a wide opening of posterior cul-de-sac. The fundus is pulled forward through the anterior opening, the uterus bisected and then each half is divided transversely into two sections which are removed with the adnexa in such order that the most involved quadrant is removed last, since in this way more room is given for the complete extirpation of this most dangerous portion. If the ureter is involved, it should be resected and anastomosed into the bladder further back, and the extirpation completed, going all the way out to the pelvic wall if necessary. Drainage is to be used according to necessity.

Raynaud's Disease in the Insane.—Superficial symmetrical gangrene, writes J. E. Courtney (*Jour. of Nerv. and Ment. Disease*, May, 1900), is most frequently associated with mental disease. There may be a shallow but actual gangrene on some part of the extremities, with detachment of the skin and gradual healing of the raw surface left. The loss of tissue is much less than the extensive blackening of the surface would lead one to expect. Abortive attacks also occur in which small areas of fingers or toes show pallor, coldness, and slight anesthesia without gangrene; or the skin of the tips of the fingers or the back of the hand may darken, shrink, and peel as in severe sunburn. In these conditions the indications are rest, hygiene, tonics and attention to the nutrition, with, locally, warmth and scrupulous cleanliness.

Tuberculosis in Boston.—The Boston Board of Health has classed tuberculosis as contagious, and requires reports of cases of this disease from physicians. During the past five years deaths from consumption in Boston have been about double the combined mortality from scarlet fever, diphtheria and typhoid fever.

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SATURDAY, JUNE 2, 1900.

THE AMERICAN MEDICAL ASSOCIATION AND THE ATLANTIC CITY MEETING.

ON Tuesday next the American Medical Association will convene at Atlantic City for its fifty-first annual meeting. Those who attended the meeting at Columbus last year have scarcely yet recovered from the feelings of discomfort endured during that oppressive weather from which no relief could be found and are welcoming with pleasant anticipation the brief sojourn by the sea. The invigorating ocean breezes of Atlantic City are proverbial, but the *Association Journal* has reached the climax of commendation in its prospectus of the meeting when it says that the air is such that we shall all feel when we take it in that we are ambassadors at the Court of St. James. A courtly grace and dignity may, therefore, be expected to sit upon every man's brow and the amenities of high diplomacy characterize the meeting's transactions. "Ambassadors" will be as thick as Colonels' fore de war.

Thorough business principles and methods seem to have characterized the preliminary arrangements and everything gives promise of a large attendance and a most successful meeting. The programs of the various Sections show evi-

dence of careful forethought in securing for discussion the live topics of the day and placing the subjects in competent hands. More and more attention is being given each year to the scientific work and the quality of the transactions is attaining such excellence that the question of embodying them in a volume of more permanent form than is afforded by the weekly journal is worthy of consideration.

The addresses also are of a high order and engaging character. These will be presented in next week's issue of the MEDICAL NEWS as well as a concise and interesting report of the scientific and business proceedings.

THE NEW YORK PATHOLOGICAL INSTITUTE.

It is no secret to the members of the profession interested in scientific research that for some time serious friction has existed between the State Commission in Lunacy and the Pathological Institute. The director of the Institute claims that he has been subjected, by the Commission, to petty annoying criticism the object and end of which he could not understand but which interrupted and interfered materially with the progress of his work; that the Commission was unable to, or at least did not, make clear to him in any definite practical way what it wanted, except to give him the impression that it was bent on putting a stop to his original scientific research and determine to reduce the Institute to a clinical-laboratory appendage to the State Hospitals, with a teaching function.

The establishment of the Institute was the first, definite, well matured and efficient endeavor ever put into practical operation to solve the problem of insanity. Naturally the MEDICAL NEWS, as well as all friends of progress along these lines, were intensely interested in the success of the enterprise. When it was assailed therefore the MEDICAL NEWS opened the question before the court of last appeal in medical scientific matters—the medical profession, and called upon Dr. Wise as President of the Commission to present his case. It has required some persistence on our part to induce him to meet the issue and we are therefore gratified at presenting in our columns this week what in legal phrase we may denominate "The Commission's Brief."

Unfortunately there is running through it all, and especially pronounced in the letter to the editor, a strong undercurrent of personal feeling, which is greatly to be deplored. The essen-

tial fundamental principle of the Institute and the hopes that its success had aroused are in danger of extinction. But this aside, the burden of the complaint seems to be that the Institute has departed from the original and avowed purpose of the legislature and of the Commission in its foundation. There may be just ground for honest difference of opinion on this point. The fact can only be determined by a careful résumé of all the annual reports bearing upon the subject and the wording of the law. In addition to what Dr. Wise has given we have space for only one quotation from the Seventh Annual Report of the Commission as follows: "The legislature at its last session authorized the establishment by the Commission of a department for the special study of mental pathology and allied subjects * * * * the aim being to provide for the exhaustive study of the causes and conditions that underlie mental diseases, from the standpoint of cellular biology, which is now elevated to the dignity of a special science; also to provide instruction in brain pathology and allied subjects for the medical profession, especially alienists and neurologists, etc." There was a dominant idea in the minds of most of the Hospital Superintendents, of which Dr. Wise was formerly one, that the Institute was founded for the purpose of simply examining morbid specimens and chemical compounds sent to it by the different State Hospitals. They have been unable to reconcile this with the broader conception of general psychological research. This is demonstrated by the fact that the Superintendents have sent to the Institute for examination, specimens of vanilla and lemon extracts, soap powders, butter to be tested for oleomargarine, water, sewer and sludge contents and finally bed-bug exterminators. Against the last the chemists did rebel. The Institute made the analyses but at the serious delay of work on epilepsy and other subjects. This has been a prominent cause of dissension.

One criticism prominently urged is that the hospital staffs and Institute do not work in harmony in the matter of instruction. During the first three years of its existence the Institute instructed sixteen men of the staffs of the various hospitals. During the winter just passed the Director solicited men from the staffs of ten of the hospitals to be sent for instruction at the Institute. Without exception "hospital duties" prevented a single member of any hospital from responding to the call. If the system of work in the hospitals prevents the members of the staffs

from attending instruction at the Institute certainly the Institute ought not to be held responsible. Even among the sixteen men who came, in former years, only one is now following out his scientific work in the hospitals; the others have resigned or been so overwhelmed with their routine work that they were forced to give up their investigations. The system of the State Hospitals and the State care of the insane is and must be, under the present system, a perfunctory one. The daily life of the physicians in these hospitals shows that they cannot give any time for scientific study of the patients under their care. The senior assistant makes his morning rounds, accompanied by his junior assistant, among 300 to 400 patients, few if any of whom he knows by sight. On this formal round there is time to chat with only a few. Before leaving the ward he must inspect clothing, bedclothes, general housecleaning and sanitation, examine reports and requisitions. He may then be obliged to follow patients who have already gone to the exercise grounds, hastily con them over, deliver instructions to attending nurses, arrange the hours of the nurses, who shall be on duty, who off, etc. During the interval before lunch if any patients are sick with intercurrent diseases they must be seen and prescribed for. During the three hours after lunch he must sit in the office to receive and talk with friends of the patients, make notes of what they say, who they are, etc. The junior spends his time writing out the long histories, making notes and copying them into the almost endless history books. The Superintendent is general manager and hotel keeper. These men are all sad victims of "a system which molds them into methodical machines with a maximum of routine output and a minimum of intellectual activity." No wonder that clinical study of the insane in the State Hospitals has proved sterile in finding the causation of insanity and presents no scientific basis for treatment. Small wonder that "hospital duties" prevent the staff from taking instruction at the Institute.

The scientific side of psychiatry still lags behind the other branches of medicine and will continue to do so until scientific men are permitted to work out unhampered the problems underlying mental disease. The insane hospitals are closed to them because the system there in vogue prevents scientific research. The physicians there are overwhelmed by executive routine and cannot work out the problem. Such knowledge can only be wrenched from Nature by long, patient,

persistent research on the part of trained scientists. Such are the men at work in the Pathological Institute. It was expected by the Commission which founded the Institute that at least ten years would be required to accomplish any tangible results looking toward the establishment of a definite pathology of insanity. The scientific work already accomplished by the Institute has attracted the favorable notice of the scientific world and this too in spite of the fact that a large portion of the time has necessarily been taken up with the details of organization and equipment. It is now going forward with its work along numerous lines of enquiry that give promise of great and far reaching results. If we mistake not, the voice of the profession will be: Hands off, give it time.

THE AFTERMATH OF THIS YEAR'S GRIP.

We have had this year, as in every year since 1890, a recurrence of the grip epidemic. The disease, therefore, may fairly be said to have established itself as an endemic in the Western world.

Each year has seen the development of certain special features of the disease. It has never come back in quite the form it presented at its previous visitation. This year has been no exception to the rule and although the season is now well advanced we have not gotten entirely beyond the malevolent effects of the disease.

Nervous symptoms have been the special complication and they have sometimes seemed to demand the presence and activity of other causative agents in addition to Pfeiffer's influenza bacillus, although they have always subsided as soon as the more pronounced grip symptoms were under control.

In children there has been a special liability during the year to the development of otitis media, which has often required a resort to the mastoid operation. This complication has been noted before, but not with such frequency as during the present year. Another feature of the past winter's influenza in children has been its proneness to cause very high temperatures. It has not been an uncommon occurrence for the temperature to reach 105° in cases of simple grip. These febrile movements have at times been very irregular or intermittent with almost daily drops to subnormal temperature. In adults as well as in children there has been a marked tendency to the development of cutaneous eruptions. Cutaneous complications have been noted very generally

also in England. These skin manifestations have usually been of the character of nervous cutaneous lesions, the multiform eruptions which are caused by the presence of toxins in the circulation, whose action is mainly on the trophic fibers in peripheral nerve-endings. Mental symptoms and sequelæ have also been a distinct feature of the disease. Many patients have labored under a depression during the course of the disease that seemed utterly disproportionate to the severity of their influenza infection. In some of these cases neurasthenia and in others melancholia have remained during a prolonged convalescence; the whole clinical picture being that of a severe, protracted and exhausting disease rather than what seemed at first a comparatively mild affection.

The phases of grip during these years of its prevalence form very interesting data for the natural history of the disease. There is undoubtedly some rule of influence in the meteorological conditions that obtain during certain seasons which it is quite within the realm of carefully compiled statistics to solve. The problem appears upon its face so complicated as to be hopeless, yet it is probable that some of its simpler elements would yield readily enough to patient investigation and the collation of weather conditions and types and quality of virulence of the disease during special seasons. Successful work in this line would be practically ground-breaking and would doubtless prove suggestive to a host of investigators.

ECHOES AND NEWS.

NEW YORK.

City Hospital Nurses.—The twenty-fifth annual commencement of the New York City Training School for Nurses was held in the chapel on Blackwell's Island May 31st.

The City's Vital Statistics.—There were 15,314 deaths in New York City during the last quarter of 1899, according to the Health Board's report. The death-rate was 17.25, based on the following borough ratios: Brooklyn 16.08, Queens 15.95, Manhattan 17.17, Bronx 22.26. The high death-rate in the Bronx is largely due to the many deaths in city institutions there of inmates transferred from Manhattan. There were 141 suicides during the quarter.

Addition to Woman's Hospital.—A four- and five-story addition has been planned for the New York Medical College and Hospital for Women, at 19 West One Hundred and First Street. The present structure will be raised one story, so as to conform with the addition. The cost will be about \$43,500.

Beth Israel Hospital.—The corner-stone of the new Beth Israel Hospital at Cherry and Jefferson Streets was laid on May 27th. Great numbers of people were present. Mr. Guggenheimer said that ten years ago "the race which realized that love of humanity transcends in its strength and beauty any theories of theology established this hospital."

Contagious Diseases.—For the week ending May 26, 1900: Measles, 577 cases, and 22 deaths; diphtheria, 249 cases and 42 deaths; laryngeal diphtheria (croup), 6 cases and 3 deaths; scarlet fever, 114 cases and 10 deaths; smallpox, 4 cases; chicken-pox, 18 cases; tuberculosis, 211 cases and 181 deaths; typhoid fever, 17 cases and 6 deaths; cerebrospinal meningitis, 7 deaths; totals, 1196 cases and 271 deaths.

Association of Military Surgeons.—The ninth annual meeting of this organization has been held during the past three days at the Academy of Medicine. The principal subjects for discussion were: Examination of Recruits; Camp Sanitation; Rations; Transportation of Wounded; Field and Service. Many of the papers read embodied the results of service in the field during the Spanish-American war, and the various insular campaigns which have followed it.

Robbed Doctor's Office.—Three hundred dollars' worth of instruments were recently stolen from the office of Dr. James W. Harris in Brooklyn. They were, however, all recovered. A man called on the afternoon of May 26th and asked for the doctor. He was not in, and the man said he would wait. A few moments later he was discovered filling his pockets from a drawerful of surgical instruments. He was subsequently caught and imprisoned.

Smallpox from the South.—There were on May 28th two cases of smallpox at Haverstraw, three at Tarrytown and one at Dobbs Ferry, all of negroes who came to this State from Newport News. Secretary Smelzer, of the New York State Board of Health, has written to the Virginia State health authorities, requesting that more stringent measures be taken in quarantining smallpox so as to prevent its spreading over adjoining States.

Roosevelt Hospital's Needs.—In the twenty-eighth annual report of the Roosevelt Hospital, which has just been published, it is stated that the sum expended for the hospital's support, \$152,677.95, including repairs and improvements, was \$7,918.68 greater than that for the previous year. During the year 2,752 patients, of whom 411 were paying patients, were treated; 65,465 visits were made to the Out-Patient Department, a falling-off of 6,228 from the records of the previous year. An additional endowment of \$500,000 is urgently needed to care properly for the present group of buildings.

Dr. Shaffer Corrects a Statement.—The New York State Hospital for the Care of Crippled and

Deformed Children has been incorporated, and Dr. Newton M. Shaffer has been made the institution's surgeon-in-chief. It has been stated that "all surgical and medical officers of the hospital except the surgeon-in-chief shall render their services gratuitously." Dr. Shaffer calls attention to an error in this statement. He has absolutely declined to receive any salary. The Doctor further informs us that "a fund of nearly \$5000 (in which I have had the privilege of joining) has been raised from private sources as supplemental to the money appropriated by the State."

Death of Dr. Otis.—Dr. Fessenden Nott Otis, formerly of this city and of world-wide reputation among medical men, died in New Orleans on May 24th at the age of seventy-five years. He was a frequent attendant at the clinical lectures in the New Orleans Charity Hospital, where he caught a severe cold which developed into pneumonia. From this disease he recovered but a carbuncle then developed from which he died. Dr. Otis was Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons from 1870 up to 1890, when he resigned and went abroad. He was graduated from the New York Medical College in 1847. He was the author of books, articles and pamphlets on medical and other subjects, and he was the inventor of a number of instruments, especially for use in genito-urinary work.

PHILADELPHIA.

Woman's Medical College.—The Chair of the Principles and Practice of Surgery and of Clinical Surgery has recently been made vacant by the resignation of Dr. Thomas S. K. Morton.

Jefferson College.—Dr. H. W. Stelwagon, Clinical Professor of Dermatology, has recently been made an honorary member of the National Dermatological Society of Italy.

Public Baths.—The second annual report of the Public Bath and Wash-house on Gaskill Street shows a total of 34,680 bathers and 1487 washers during the year. Indications point to the institution becoming self-supporting in a few years.

Rural Sanitation.—In an address before the Health Authorities' Association at Mechanicsburg, May 24th, Mr. W. H. Allen of the University of Pennsylvania stated that local supervision of rivers was futile in obtaining pure water supply for cities. Cities should seek to abolish river pollution rather than to mitigate it by filtration, etc. Inspectors under the direction of the State Board of Health should patrol the rivers of the State.

Health Report.—Deaths for the week ending May 26th were 424, a decrease of 111 from those of the previous week and an increase of 40 over the corresponding week of last year. Contagious diseases: Diphtheria, 88 cases, 16 deaths; scarlet fever, 59 cases, 2 deaths; typhoid fever, 66 cases, 6 deaths. Influenza was the cause of 4 deaths.

Medical Examinations.—Dr. S. Weir Mitchell, in a recent communication to the *Philadelphia Medical Journal*, expresses himself as strongly in favor of an oral examination being added to the present test of the State Board of Examiners. It is unfair to subject men practically trained to only a written examination. For this reason practical tests should also be made, as questions upon a dissection, the description of microscopic slides, a single urinary examination, etc. It is essential that the State Board by degrees improve its tests.

Pathological Society.—At the meeting held May 24th Drs. Pearson and Ravenel exhibited a lung containing a dense growth of the *aspergillus fumigatus*. The specimen had been removed from a cow which died six months after showing symptoms, there being almost continuous cough for the last two months. The lung was markedly emphysematous and the bronchi were involved. Portions resembling partially-organized hemorrhages proved to be networks of mycelial threads. In the discussion which followed Dr. McFarland mentioned the fact that the specimen was presented by the first veterinarian admitted to the Society. The wisdom of admitting such members is evident from the benefit to be derived from comparative pathology. Dr. McFarland then exhibited cultures of the plague bacillus. Some cultures of the bacillus are pathogenic for rabbits and not for rats and *vice versa*. This suggests the possibility that it may at times be pathogenic for man when rats are not affected. The bacilli are much fewer in number in septic cases than in the other forms of the disease. Dr. A. O. J. Kelly reported a case of papillomatous epithelioma of the pelvis of the kidney. The tumor was removed from the kidney of a patient sixty-one years of age. It was the size of a walnut and projected partly into the parenchyma of the organ. Interstitial nephritis of high grade was present, and the symptoms somewhat resembled those of renal calculus. Dr. Simon Flexner reported the results of investigations concerning the nature of the new tissue in cirrhosis of the liver and its distribution. The experiments were made possible by the recent discovery of a specific method of staining elastica. The results show that the new tissue is not elastica alone, as was at one time supposed. After staining this tissue, it and the cells were digested away by pancreatin and new tissue was still left. Further tests show that the new tissue is made up of all the kinds of connective tissue normally present in the liver. No one kind alone is increased in cirrhosis, but all kinds are increased. When the process is confined to the periphery the fibrous and elastic tissues are increased in amount, the elastica being derived from the adventitia of the blood-vessels and the fibrous tissue from that surrounding the bile-ducts. When the lobules are coarsely invaded, white fibrous tissue grows in from the periphery. The finer involvement of the interior comes from the reticulum which increases in amount.

County Medical Society.—At the stated meeting May 23rd, Dr. H. W. Cattell gave a kromoscopic exhibition of pathologic specimens by means of lantern-slides. The natural colors of the specimens were exceedingly well shown. The photographs shown had been taken through all the color-screens at once. This method is advised for the use of teachers of anatomy or pathology, as the kromoscope itself can hardly be used by a large class of students. It is also of value in the illustration of books, as a picture can be taken directly from the fresh specimen and the printer given the kromoscope, with instructions to reproduce the colors. Dr. J. P. C. Griffith read a paper upon laboratory feeding of infants in health and disease. Fat is the most variable ingredient in herd milk, but the centrifuge determines the amount where laboratories are not convenient. Physicians must not think that laboratory milk is an entity. Anything wanted can be ordered, the same as at a drug store. The objection has been raised that laboratory cream is a separated product. This is a trivial objection as practically all cream is so obtained these days. However, the cream will be skimmed at the laboratory if so ordered. Dr. Griffith begins with a low mixture, say .50 per cent. proteid, 2 per cent. fat, and 5 per cent. sugar. This formula is increased as the infant needs, not according to its age but according to its gain in weight. Great stress is laid on weighing the infant once or, better, twice a week. A case was cited in which the proteids were increased because of the age of the child, although it was doing well. It at once lost weight but began gaining when the proteids were decreased. The fact was emphasized that very small changes in the formula will be noticed in the child's condition. This argues for percentage formulae. Three cases were detailed where laboratory milk had been used but in wrong proportions, each case showing marked improvement when experimentation determined the proper percentage. These cases might have been used as an argument against laboratory milk when they were really due to carelessness on the part of the physicians. Dr. L. S. Somers stated his results from the internal use of adrenal extract in 21 cases of hay-fever. Tablets were found to be preferable to a solution, one five-grain tablet being given every two or four hours as the patient could stand. As high as seventy-five grains daily were given in one case with no untoward effect and with no effect upon the disease. In 6 cases the paroxysms of asthma were more frequent during the use of the extract. In 5 others asthma first appeared during its use. The conclusions reached are that adrenal extract is practically inert in its action on hay-fever when given internally. Some effect is obtained when the tablets are dissolved in the mouth. It is of service when applied locally to the mucous membrane of the respiratory tract.

CHICAGO.

Down-Town Emergency Hospital.—Dr. Ger-

trude Wellington recently appeared before the Finance Committee of the City Council and urged the establishment of an emergency hospital in the down-town district. The Finance Committee expressed their willingness to recommend the appropriation of \$2000 to aid in the undertaking, with a share in \$3,000 now given annually to St. Luke's and Mercy Hospitals.

To Treat Consumptives.—Health Commissioner Reynolds says that Chicago has already taken steps toward preventing the spread of this disease, and in commenting on the report from Boston that the health authorities there had determined to disinfect every house containing a consumptive patient and to begin a campaign against the contagion, he is quoted as saying: "It is a mistake to try and make a consumptive feel that he must be an exile or a leper to be shunned by everybody. In the first place, the disease may drag along for forty years without any sudden developments to enable a doctor to diagnose it correctly, and then again it is curable. The best way is to get the patient to believe that he can be cured, and that he can also be of use to the community by preventing the spread of the disease. If consumptives would deposit their sputa in a paper and then burn the paper, there would be no fear of contagion."

Formaldehyde and Milk.—In the office of the milk-inspector are samples enough of adulterated milk to show that the use of formalin is widespread. The milk-inspector has received letters from several milkmen which in substance state that the prompt prosecution of dishonest dealers would protect the honest milk-deliverers quite as much as it would the customers. The Health Department has decided to use moral suasion for a time, then, if such measures are not effective, the milkmen who use formalin as a preservative will be prosecuted. A number of notices have been sent out and the milkmen are stopping the use of the chemical almost everywhere. It is believed that a great deal of the damage done by this preservative has been wholly unintentional; that many of the milkmen have used preservatives with honest purposes and no thought of danger. The stand taken by the Health Department against the use of formaldehyde will go a long way toward stopping the practice of poisoning the milk intended for the nourishment of little children and sick persons, but prompt action by housewives and mothers in ceasing to deal with all milkmen whose milk stands the test of time for too long a period would settle the whole difficulty.

Disinfection of Chinatown.—The Health Department inspectors of sanitary conditions are making a round of the Chinese quarter in an attempt to improve conditions in that district of the city. The recent developments as regards bubonic plague have led the Department to increased vigor in insisting upon better sanitary conditions. The inspectors will disinfect by

wholesale the Chinese district, and two inspectors have been instructed to watch the Chinese habitations for the arrival of newcomers from any other city on account of the possible transmission of bubonic plague. A mandate has been issued that cleanliness must be observed whether the occupants of dwellings enjoy the process of disinfection or not.

Prosecution of Dowies.—The attorney for the State Board of Health, it is said, has obtained evidence on which he expects to direct civil proceedings against certain of Dowie's followers, and probably Dowie himself. The proceedings will be in the form of a suit for damages claimed by a Mrs. Bone for injury to her daughter's health. The disclosures made concerning the girl's treatment show that the institution of Dowie is beyond toleration by the Health authorities. The evidence to be brought in the courts will show the necessity of revising the provisions of the Medical Practice Act which permits these faith healers to operate.

Bubonic Plague.—In the weekly bulletin of the Health Department, Dr. Arthur R. Reynolds takes occasion to say that recent developments in the plague situation fully warrant his action taken more than four months ago, when he urged the Surgeon-General of the United States Marine Hospital Service to call a conference of public health officials for the purpose of deciding upon uniform and cooperative measure for preventing the introduction and spread of bubonic plague in this country. For want of such measures the State of Texas has now quarantined against the city of San Francisco, and a large area of the country is in a state of alarm bordering on the panic which so often breeds shotgun quarantines in the yellow-fever zone of the South. It is to be feared that this is but the beginning of costly and vexatious interruptions of travel and traffic wholly unwarranted by any actual menace to the public health of the country. In the absence of authentic information, frankly published without suppression or concealment, disquieting rumors will gain currency; restrictive efforts will lack uniformity, and the efficiency to be gained by co-operation; business interests will be injured and the public mind will be so perturbed that the public health will suffer far beyond any probable results of the plague itself. What now remains for Chicago, as for every other community, is to set its own house in order; to spare no effort for that degree of civic cleanliness which, while making the spread of the bubonic plague impossible, will also improve the general health. More has been done in this direction during the past few months than in any spring period for many years, and Chicago is to be congratulated on the success of the efforts of individual citizens and householders for a cleaner city. The change wrought in the appearance of many alleys is a revelation. It is an object lesson which is being copied widely and gives promise of the complete abolition of the disease-breeding manure box and

the equally obnoxious garbage box, illegal nuisances that are the cause of more avoidable disease and death than any other. When they are finally abolished, Chicago will have no reason to fear the plague or any other pestilence.

Vital Statistics.—For the first time in many weeks no death from influenza was reported last week nor was it mentioned as a complicating cause of any other disease. One death from smallpox, seven from measles, and six from whooping-cough were reported. There were 45 deaths from violence and suicide. There were 502 deaths reported last week, this being 25 less than the preceding week, but 106 in excess of the corresponding period of last year. A very unusual feature of the week's mortality-list for this time of the year was the report of three deaths from sunstroke. The very hot weather of the early part of the week was responsible for the acute intestinal diseases, there being 36 from this cause, as compared with 17 the week preceding.

Inspection of Milk.—At a meeting of the Chicago Medical Society, held May 23d, Dr. Arthur R. Reynolds spoke on this subject. In referring to the results of milk-inspection by the city, he said that when the inspection of milk was begun by the city it was found that 45 per cent. of the milk sold in the city was below the standard. Now only 10 per cent. is below the required grade. The great trouble with the system is that it does not prevent the adulteration of milk by second- and third-hand dealers. The people must be instructed as to the quality of milk and must remember that they cannot hope to buy good milk for a small price.

Inspection of Herds by Veterinarians.—Dr. A. H. Baker discussed this subject. It is now a well-accepted fact that dairy-cows must be examined by competent State veterinarians at least once a year. No animal is more susceptible to disease than the average dairy-cow. Every little indisposition of the cow, and, indeed, every different mental state, has its effect on the milk. A change of diet will have its immediate effect. The only way to obtain a good milk-supply is to have healthy cows. The only way to be assured of the health of a cow is by the annual tuberculin tests of veterinarians. The tuberculin test will show immediately whether or not the cow tested is diseased, and the best proof of its reliability is found in the fact that only 2 per cent. of the cows killed were found to be without disease. There is no doubt about the advisability of having the State conduct these annual tests of the dairy-cows.

Feeding of Milk to Infants.—Dr. W. S. Christopher discussed this phase of the subject, and declared that there are children whose constitutions are such that milk has the effect of a poison on them. He advocated feeding fresh beef-juice to children who are thus constituted.

The Dairy Farm.—Mr. H. B. Gurler dwelt upon this topic. He described the precautions that

should be taken in producing the marketing milk. He believes that absolutely pure milk could be kept on ice for two weeks and still be fresh and sweet.

GENERAL

Astor's Gift to a Hospital.—William Waldorf Astor has sent a check for £10,000 to the Maidenhead Cottage Hospital in celebration of the coming of age of his eldest son.

Couldn't Afford to Lose Him.—A Scott County (Kan.) physician recently moved to another part of the State because he could not make both ends meet in his practice. But his old patients needed his services so badly that they circulated a petition asking the County Commissioners to appropriate a bonus of \$500 annually to the doctor on condition that he should return. The Commissioners made the appropriation, and the doctor returned.

Infection from Sweatshops.—The Mothers' Congress at Des Moines, Iowa, May 25th, listened to a paper on the sweatshop, read by Mrs. Florence Kelly of New York, Secretary of the Consumers' League. It seems that it is the fault of women that sweatshops exist, because if garments made under sanitary conditions by fairly paid labor were insisted upon, the dealers would furnish them. The Consumers' League has, after years of labor, made a list of fifteen factories where women's underwear is manufactured under proper conditions, and the goods made by these factories bear the label of the League. Mrs. Kelly considers that the danger from germs is as great in sweatshop garments as in children's food.

State Colony of Insane.—There has been reported to the Massachusetts Assembly a bill for the State support of the insane paupers in the State. The bill goes into effect on January 1, 1904, and it forbids any city or town to have any asylum for the insane after that date, or to be liable for the board, care, or treatment of any insane person. The bill provides for the purchase of from 1500 to 2500 acres in some tract, at a cost of not over \$25,000, and the expenditure of not over \$50,000 is permitted for the erection of buildings for the dwellings of the insane. Thus there will be a State colony of the insane, living in small numbers in separate cottages. It is expected that the able-bodied insane will be set to work on land.

Increasing Population of Japan.—A correspondent in the *Evening Post* writes: "On witnessing the high state of cultivation to which the fields are already subjected, and the extent to which the arable land is already occupied, one soon becomes oppressed with the problem of what is to become of the increasing population after a few years. Everywhere one sees swarms of children, and, on consulting statistics, it appears that the present rate of increase is about 500,000 annually, or a little more than one per cent. Ten years ago the population was about 37,000,000. At the present time, including the 3,000,000 annexed in

Formosa, there are 46,000,000. An important factor in the future increase is to be found in the decreasing death-rate resulting from improved sanitation and the dissemination of higher medical skill. Taking all these things into consideration, it is not too much to expect that, with a continuance of present social conditions, the population of the Empire will double within the next fifty years, reaching 100,000,000 shortly after the beginning of the second half of the century."

Smallpox in Excursion Party.—The steamer "New England," of the Dominion Line, sailed from Boston February 1st with a party of excursionists on a tour of the Mediterranean Sea. Upon arriving at Naples it was discovered that smallpox had developed among the members of the crew and had been communicated to some of the passengers. The state of affairs was not known to the passengers generally, and while the excursionists were visiting Rome, the captain of the ship discharged the passengers' baggage and after disinfecting his ship sailed suddenly for Liverpool. The baggage was finally fumigated and forwarded overland to Liverpool. Transportation for the passengers was also secured. One of the excursionists, a young lady from Minnesota, died at Rome from the effects of the epidemic; and another excursionist, a lady from Worcester, Mass., also died from pneumonia.

A Doctor Recovers Damages.—Dr. Walter B. Wellbrock, of Brooklyn, secured a verdict recently in the Kings County Supreme Court for \$25,000 for damages received by the running down of a tally-ho coach by a train of the Long Island Railroad. Dr. Wellbrock's injuries were most severe; his right arm was fractured in three places, his left leg in four places, and his left arm in two places. His left arm was dislocated at the shoulder and his left patella was fractured. Many others on the coach were also injured but not so severely.

A Professional Promoter of Charitable Enterprises.—One J. W. Stokes, a young man of charming address and kindly demeanor, seems to have conducted in Boston, St. Louis, Cincinnati, Cleveland and many other cities, a number of enterprises calculated to raise money for charitable causes. He seems to have found this work rather more remunerative for himself than for the institutions concerned. For instance, Mr. Stokes has lately consummated an entertainment for the benefit of the Sunshine Mission, whose purpose is to improve the condition of the youth of the "Hell's Kitchen" district in this city. The mission benefited to the extent of \$55.00. The rest of the money received—a very goodly sum—was appropriated by Mr. Stokes in payment for his own services. It appears to us that a good many enterprises which have of late years been conducted ostensibly in behalf of hospitals and dispensaries in this city, have been managed upon Mr. Stokes' plan.

Obituary.—Dr. Charles M. Newell, physician, sailor, poet and writer, died at his home in Waverlytown, Mass., on May 25th. When fourteen years old he ran away and shipped on a whaling craft. He became a captain and spent a winter in the Arctic regions, exploring to a point farther north than any American up to that time. He spent some time in the Hawaiian Islands and was decorated by King Kalakaua in 1888. He practised medicine for thirty-five years in and near Boston.

Army "Contract Surgeons."—A bill for the relief of the acting assistant surgeons of the Army has been introduced in the United States Senate and is now before the Committee on Military Affairs. It ought to become a law. These surgeons, called also "contract surgeons," were employed during the Spanish War and many of them are still in service in the Philippines and in this country. Their monthly salary is \$150; they wear army uniform without any badge or indication of rank, and they perform all the duties that regular surgeons perform at larger salaries. This bill, if passed, will remedy a great deal of injustice. It provides that hereafter all contract surgeons shall have the allowances and privileges of first lieutenants, except the pay, which shall continue to be \$150 a month. All acting assistant surgeons appointed since May 1, 1898, shall be paid for sick leave and for ordinary leave not to exceed thirty days in each year of service; and gives them the right to file claims for back pay for such periods of leave, for commutation of quarters, and for travel pay and allowances, "which may have been withheld from or not paid to them." Other sections of this bill are also commendable. The medical service, both in the Army and the Navy, is not especially attractive to good men; and any movement tending to make it more so should be furthered.

The Plague.—There have been no new cases discovered in San Francisco since our last report, although a suspicious case is now under investigation. In all nine cases had occurred prior to May 15. The Board of Health has placed all of Chinatown in quarantine and no one is allowed to enter or go out of the barriers. In the mean time a renewed house to house inspection is being made and sanitary measures enforced. The special correspondent sent out by the *New York Herald* is presenting to the public in a forcible way the reports already communicated to the proper authorities of the Board of Health and the Marine Hospital service and is thus establishing the confidence of the public in the authorities. In the mean time the larger cities of the country which are possessed of quarters known as Chinatown are anticipating any future trouble by inspecting and enforcing sanitation. At Rio Janeiro, May 27, two cases were reported in Hospital Misericordia, one in the Hospital Carmen, one in the barracks of the First regiment of infantry, and other cases throughout the town. On the same date at Port Said one new case of plague

and one new death, both the victims being Arabs, were reported. There are now eleven Arabs in hospital, and four Europeans. The total number of cases to date is forty-four, of which twenty-one have ended fatally and eight have been cured.

In India according to a special to the *New York Times*, April 26, the outlook is of the gloomiest possible description. From every stricken province the weekly returns show steady increases in the totals of people on famine relief, with the solitary exception of the Punjab, where the figures are for the time being more or less stationary. There are now close on 5,500,000 persons in India in receipt of famine relief, while the actual number of people who are severely affected by the extreme scarcity must by now be close to 100,000,000.

The spread of the plague throughout India is such as to give rise to the most serious alarm. For the last three years or so the plague has to a large extent been confined to the west side of India, especially Bombay. But it has gradually spread over a vast extent of country, and at the present moment there are few provinces which are not to some extent afflicted. In Bombay, Sind, and Southern India it is rampant. There are many deaths daily in Calcutta and its neighborhood. Throughout the lower provinces of Bengal there is great mortality from this cause. Recently there have been cases in the northwest provinces. Certain districts of the Punjab are afflicted. And there are signs that the fell disease will gradually extend all over the country.

There are many disquieting features about the course of the plague. To prevent its spread it is absolutely necessary to carry out measures of disinfection and isolation. These the people resent to an extraordinary degree. They are convinced that the Government doctors have orders to poison off all patients, and thus to stifle the spread of the disease. They proclaim that no one who goes to a Government plague hospital ever comes out of it alive. The result of all this agitation is that there have been serious riots and disturbances arising from plague prevention measures.

The doctors employed on plague duty go about in fear of their lives, for it is only necessary to be known as a plague doctor to cause a mob to assemble for the purpose of murder. Some soldiers driving through a native town a few days since in a perfectly quiet and harmless manner were mistaken for plague doctors. They were immediately set upon and so beaten and ill-treated as to be left for dead.

Smallpox in the Philippines.—Surgeon-General Sternberg describes the situation in the Philippines as regards smallpox and vaccination as follows:

"At the time of the occupation of Manila smallpox prevailed as an epidemic in the city and the neighboring towns and villages, particularly among the native population. The troops were exposed to the infection within a day or two after

their arrival. The period of incubation is two weeks, and on September 3 the first case was taken from the command and isolated in a smallpox ward established as a part of the First Reserve Hospital. Arrangements were made and promptly carried into effect for the protection of the troops by vaccination, but cases of the disease occurred until March 31, 1899, when all danger of its epidemic spread was declared by the Chief Surgeon to be at an end. During this time 236 cases were reported, with seventy-seven deaths. During the remaining nine months of the year 1899, twenty-three deaths were reported, making a total of 100 in the eighteen months. The unusual length of time occupied in controlling the disease was due to the difficulty of obtaining fresh vaccine. That which was sent from this country evidently suffered deterioration during the long voyage. Ultimately fresh virus was obtained by cultivation in the laboratory of the Board of Health of Manila. As compared with our losses from this disease in the Philippines it may be stated that the German army, in which vaccination is carefully conducted, lost 278 men by death from smallpox during the seven months of the Franco-Prussian war, while the French army, during the same period, had the appalling loss of 23,000 men from this disease. Our white troops during the civil war reported 4717 deaths from smallpox."

CORRESPONDENCE.

THE PATHOLOGICAL INSTITUTE AND THE STATE COMMISSION IN LUNACY.

To the Editor of the *MEDICAL NEWS*:

DEAR SIR:—A well-established principle of the State Commission in Lunacy is to take no public notice of inuendo, contumely and carping criticism, which may be anticipated by a State department with interests as great and varied as those of the department of insanity in New York. Your recent editorials—the last appearing in the issue of the *MEDICAL NEWS* of May 19th, *instant*, which bears the guarantee of a responsible and influential journal, although the ear-marks of an individual—contain so many perversions of fact and libellous intimations, that they form a sufficient reason for this departure from precedent, especially on the part of the writer. He can better reply to these misleading statements, which he ascribes rather to misinformation than to any intent to do an injustice, by supplying correct data in a brief résumé of the circumstances and motive which led to; and the needs to be served by, the creation of a central laboratory (the Pathological Institute) for the State Hospitals, as well as the present effort of the Commission to have its work modified in the degree necessary to meet existing hospital requirements. When the Institute was organized in 1896, there were nine (9) State Hospitals; but by the transfer of the New York City and Long Island institutions to the State,

the several units of organization now number fifteen (15), with an aggregate insane population of 22,000, receiving approximately 4000 patients annually, and having about 130 physicians engaged in the medical service, exclusive of the Institute staff. The fundamental element of the "State Care Act" was cooperation. This applied chiefly to administrative requirements, both in the interest of improved service and for economic reasons, and soon became an established function. Later, cooperation seemed equally applicable to scientific research. Hitherto each hospital had a laboratory, usually with inadequate equipment, and the superintendents agreed that if the several hospitals were united in a central laboratory, with a directing pathologist of a higher grade than it was possible for any individual hospital to afford, it would result in an improved service and economy, and would enhance scientific research. It was always maintained that the central laboratory should be created "primarily for the State Hospitals," as the published reports of the Commission and of the several hospitals will show. Clinical and pathological research were to be prosecuted with a mutual interest. The central laboratory, which was created in 1896 and entitled "Pathological Institute of the State Hospitals," was to be virtually the several smaller laboratories united into one, giving thereby the advantages which usually accrue to concentrated effort and united endeavor. But the union of clinical and pathological work was not to be disturbed, and their codependence was rather to be cemented than disrupted. The Institute after all was but a State Hospital laboratory of large proportions, located in New York City because it was in close proximity with two-thirds of the committed insane in the State. When, therefore, the Director of the hospitals' laboratory began the process of amputating the hospitals from it—severing their relations—and manifesting an unmistakable tendency toward the creation of an independent institution, substantially averring in an official document that the hospitals were not required, that they had no suitable material in the line of research he contemplated, it became justly a cause for complaint by the medical superintendents, and the Commission was petitioned to save for the hospitals this important and necessary adjunct to their clinical work. With the complete and costly equipment of the central laboratory, the hospital laboratories were not maintained except to meet the ordinary clinical requirements, all special research being dependent upon the cooperative laboratory. It appears astounding to the well-informed and shows an ignorance of insane hospital possibilities to claim that no value for pathological purposes attaches to the enormous number of cases received in them; many of the admissions being of the same types received in general hospitals, such as delirium, toxic cases, etc., which go to make up the cases "not insane."

One of the chief benefits anticipated from centralization, and announced by the Commission

upon the creation of the Institute, was "to provide instruction in brain pathology and allied subjects for the medical officers of the State Hospitals, and to other members of the medical profession," etc. This function has been in a great measure ignored, and in the few instances where medical officers were received at the Institute, it was a matter for complaint by the Director that it retarded research by absorbing the time of the staff to such a degree as to be discouraged, and experience indicates that it has been.

At the bi-monthly conference of hospital superintendents, held in Albany in January, *ultimo*, there was a unanimous expression of opinion and sentiment, which was emphatically favorable to a continuance of the Institute and original research, but in an equal measure called for a modification of the existing scope and methods of its practice, to meet the practical and clinical needs of the Hospitals. The following excerpts are from the stenographer's notes: "The lines on which it has been conducted have not been for the best interests of the Hospitals, and for the interests of the insane in them." "The foregoing expresses very clearly my ideas in regard to the Institute. . . . I believe the work could be changed—could be more practical." "We have not been closely enough in touch with it . . . bring the hospital work closer to research." "I think the work should be more closely identified with the Hospitals." "Research could have practical application in a measure, at least, for the benefit of the insane in the Hospitals." "I want to see it (the Institute) preserved, but its work should more nearly meet the needs of the Hospitals." "I think the work has departed from the original design and does not agree in fact with the scope outlined by the Director in his introductory," etc., etc. These opinions could be multiplied, and although unanimous with the New York State hospital superintendents, it is the prevailing sentiment of psychiatrists engaged in hospital work and cognizant of hospital needs.

It is sincerely to be regretted—and by none more than the writer—that personalities should enter into a controversy of so grave a nature as this. The largest measure of spleen and complaint seems to be opened upon the medical member of the State Commission in Lunacy; and chiefly, it is assumed, for his former loyalty to the Institute as administered and for his support of the Director. The writer appealed to the superintendents to withhold criticism and complaint, relying upon the assurances of the Director, frequently repeated, that a demonstration would soon be made which would receive the plaudits of the scientific world and would quiet all critical and complaining elements. The waiting process is still going on, for there has been no disturbance of the Institute, either in its organization or methods. Thus far the demonstration is confined to the promulgation of a theory not generally accepted. It is not denied that the Institute has effected some excellent work in

original research and has still more in progress.

Inquiry into economic features of the work has been forced upon the Commission. The annual expenses of the Institute has been approximately \$40,000. The specific appropriation for 1899 was \$36,000. The rental for rooms is more than \$6000 per annum. Criticisms were frequent from medical men and neurologists of New York and elsewhere, physicians who have recently signed a protest against disturbing the present methods of the Institute, complaining of illegitimate application of public funds to the self-aggrandizement of the Director and his associates, in promulgating impossible and unscientific theories. It was charged that under the influence of a psychologist (not a physician) the Director was making the so-called scientific work of the State Hospital system the gibe of psychiatrists and pathologists. Through it all he was faithfully supported by the Commission, the President appearing annually before the respective appropriation committees of the Legislature, and upon his responsibility as a public official stating that the public moneys to be expended by the Institute were requisite, that no economies were possible, and that it was being conducted in accord with the avowed purposes of its creation.

It was not until the autumn of 1899, and after the Institute had been practically vacated for more than three months without the approval of the Commission (although the contention of the Director had been that a light, airy and cool location was necessary, regardless of cost, on account of the necessity of continuing work during the hot weather), that in response to a sharp and peremptory official criticism of such action, aimed particularly at the medical commissioner, an inquiry was made into the scope, methods and administration of the Institute. Up to this time, the acts of the Director, as well as his organization and methods had been loyally supported by the President of the Commission. Besides the Director's associates respectively in charge of the departments of pathology, normal histology, pathological histology, cellular biology, bacteriology, physiological chemistry, psychology, anthropology, and comparative neurology, there was also a corps of lay employees, known respectively as librarian, archivist, preparator, indexer, accountant, stenographer, janitor, janitress, several of whom had assistants. As soon as this officer, however, proposed an inquiry, editors of newspapers (medical and lay), State officers, and especially the Governor, physicians, and especially neurologists—who had previously been ignored and condemned as critics or colleagues and scouted as peers—were appealed to for support on the ground of an attack aimed particularly against scientific research. This contention is unfair, baseless and without a scrap of evidence. It is ethically audacious and extravagant, unjust, in the face of evidence showing the chief object of the inquiry to be the enhancement of scientific research in the pathology of insanity, aided by clinical resources.

The Commission called to its aid a committee of three physicians who are preeminent in their departments of practice, two of whom were psychiatrists and one a teacher of pathology in a leading university, to examine the scope and methods of the Institute, and report as to their value, the justification of the department of insanity in maintaining so comprehensive a scheme of research and the degree in which the present development of the Institute realizes the purposes of its creation. The report is too lengthy to quote in this letter, but the conclusions are as follows:

"1. The Pathological Institute should be maintained, but reorganized on a basis that shall have systematic teaching as its main function.

"2. It should teach the fundamental principles whose study and application must lead to the clinical, anatomical and chemical research necessary for advancement in the curative and preventive treatment of insanity.

"3. It should have as its director a physician who has had training in clinical psychiatry, besides being a competent pathologist.

"4. It should be located on property of the State, in a building of its own, as near to the metropolitan medical schools as is practicable.

"5. As an essential of its teaching function its building should adjoin, or be a part of a small hospital for the insane for the reception of acute cases and others appropriate for investigation.

"6. Entrance into the medical service of the State Hospitals should be conditioned upon previous training in the Pathological Institute."

In contrast to the foregoing facts, and impartial statement of the attitude of the Commission, its President, and others, I hope your readers will refer to the editorials in the *MEDICAL NEWS* *re* the Pathological Institute, and the following petition which has been assiduously circulated for signatures, with an accompanying letter. I trust you may see fit to publish this petition and letter *verbatim et literatim*, as follows:

"In view of the fact that the Pathological Institute of the New York State Hospitals, founded by Dr. Carlos McDonald" (The official records show that the Institute was created by law, under the direction of the State Commission in Lunacy which was composed of three commissioners.—Note by the writer) "in the year 1896, has been carrying on scientific research in Psychiatry on lines of investigation as worked out by Ira Van Gieson, the Director of the Pathological Institute and his associates, thus helping to further the advance of Psychiatry; and in view of the fact that Dr. P. M. Wise, President of the State Commission in Lunacy of the New York State Hospitals, and Dr. Edward Cowles, Superintendent of the McLean Asylum, Chairman of the Committee appointed by the above-named Commission in Lunacy (*sic*), to sit in judgment and pass sentence on the work and principles of the Pathological Institute have decided and have actually attempted under the plea of paternal guidance and legislative supply of resources, to interfere,

subvert and destroy the scientific work of the Pathological Institute, handing it over to the 'superintendency of New York State Asylum superintendents,' and putting psychiatric investigation under 'their direction and control,' according to the old asylum methods, to do as Dr. Wise insists what the laboratories have always done in the State Hospitals, "resolved, that we, the undersigned, protest most emphatically against such a ruthless act of subverting and destroying a scientific Institute of great promise for the science of psychiatry, and condemn the interference with the scientific research work of the Pathological Institute, and protest against the crippling of its methods and principles of scientific investigation, either by forcing it to labor in the old pathways of asylum routine or to become the 'handmaid' as the committee puts it, of asylum men working at the will and command of asylum superintendents, or to divert its energies into educational schemes; and that we sustain the Pathological Institute along its present lines of organization, and principles and research.

"E. L. Trudeau, M.D.,
Edward D. Fisher, M.D.;
Graeme M. Hammond, M.D.,
E. C. Spitzka,
J. George Adami, M.C., M.D., R.S.E."

The following letter shows conclusively that duplicity is occasionally an implement of psychopathologists, and will explain to many signers of the "milder protest"—which the writer, by the way, read at the recent meeting of the American Medico-Psychological Association, with the alleged signers—and that even apostles of higher research may fear "inexpedient truth." It may also explain the perversion of fact so freely promulgated of late, regarding the attitude of the writer. It would seem that not much "mature deliberation" was required to establish the value of either document.

"Pathological Institute,
New York, May 17, 1900.

"Dear Doctor:—

"Will you please look over the accompanying protest against the crippling and destruction of the work of this Institute, and let me know if you feel like joining with several men in New York, Boston, Philadelphia and Baltimore with your signature. I am in great haste to get the returns in order to present the protest at the coming meeting of the American Medico-Psychological Association. For I apprehend at this meeting that an issue will arise determining the fate of our cause. I have only had a few hours this morning to collect such New York signatures as you see appended. I enclose a much stronger protest, but which upon more mature deliberation we thought was too inexpediently truthful, and we shall therefore not use it. I wish very much to get the returns on Monday morning. If you think that answer by return mail would be too late to reach us, please telegraph us collect. *As far as we are concerned we should like to have signatures to the forcible protest, although we*

should not present this at the American Medico-Psychological Association, because the milder draft would be more effective there.

Yours very truly,

Ira Van Gieson."

It probably will not require further examples of the effort to "mold professional sentiment" than is illustrated above. When it is stated that the Commission has respectfully invited the Director to cooperate with it, and to submit suggestions applicable to bringing the Institute within statutory requirements, without even the courtesy of an acknowledgment, the imagination of the reader can complete this history.

It may be stated that there has been no suggestion or proposition emanating from the Commission or any Commissioner, or from any superintendent of a State Hospital, to "interfere, subvert or destroy the scientific work of the Pathological Institute," or even to disturb it. All such accusations are the product of a morbid fancy, and might be explained as arising from a symptom group, which forms a common enough clinical picture. There has been no attempt at persecution; on the other hand the utmost graciousness has been extended, and forbearance has been shown beyond any official precedent, in view of the duties and powers of the Commission, in Chapter 545, of the Laws of 1896, which is as follows: "The Commission shall appoint a director of the Pathological Institute, who shall perform, under the direction of the Commission, such duties relating to pathological research as may be required for all of the State Hospitals for the insane."

Finally, the Commission, the superintendents of State Hospitals, all true friends of progressive science, as well as the MEDICAL NEWS, desire a continuance of pathological research into the causes and pathology of insanity and the continuance of the Institute without abatement, but to be administered in compliance with the requirements of law, without extravagance, and in accord with the consensus of professional opinion and the dictates of scientific common sense. This cannot be better illustrated as regards practical psychiatrists than to put in evidence the following unanimous request of the superintendents of the New York State Hospitals:

"In view of the recent discussions as to the work of the Pathological Institute of the New York State Hospitals, the undersigned superintendents of the hospitals request the Commission in Lunacy to make such modifications of the work as will bring about a closer relationship between the clinical and pathological departments, while affording at the same time the widest scope to original research work. We desire the encouragement and advancement of such original work, and believe that the importance of clinical investigation should receive recognition, having in view the welfare of the insane and the advancement of science.

Charles W. Pilgrim,
Supt., Hudson River State Hospital;

Arthur W. Hurd,
 Supt., Buffalo State Hospital;
 Charles G. Wagner,
 Supt., Binghamton State Hospital;
 William Mabon,
 Supt., St. Lawrence State Hospital;
 George A. Smith,
 Supt., Central Islip, Manhattan, State Hospital;
 E. H. Howard,
 Supt., Rochester State Hospital;
 A. E. Macdonald,
 Supt., Manhattan State Hospital, East;
 H. E. Allison,
 Supt., Mattewan State Hospital;
 R. M. Elliott,
 Supt., L. I., Brooklyn, State Hospital;
 H. L. Palmer,
 Supt., Utica State Hospital;
 S. H. Talcott,
 Supt., Middletown State Hospital;
 W. A. Macy,
 Supt., Willard State Hospital;
 E. C. Dent,
 Supt., Manhattan, West, State Hospital;
 O. M. Dewing,
 Supt., L. I., Kings Park, State Hospital;
 D. H. Arthur,
 Supt., Gowanda State Hospital.

(Representing hospitals with an aggregate of 22,000 patients.)

It is therefore to be regretted that you have been so far misled as to state, editorially, that "attacks in (?) scientific research are committed by a man who, if he is not, still claims to be the chief and leader of the psychiatric profession in the United States." (The writer has not the egotism to apply this title to himself; but who is he?); and that "a heavy iron hand is put on its" (psychiatric research) "very heartstrings with the intent to crush out its activity and life." Moreover, it is hoped that you will correct, as far as possible, this injustice toward an earnest, honest and law-abiding impulse to uplift science and enhance research without violating the statutes of the commonwealth.

P. M. WISE, M.D.,

Pres., State Commission in Lunacy.

1 Madison Avenue, New York.

May 26, 1900.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, May 24, 1900.

THE ANTIVIVISECTION CAMPAIGN—ACTION AGAINST THE BRITISH MEDICAL ASSOCIATION—THE POLYCLINIC—EXOPHTHALMIC GOITER WITH UNILATERAL PROPTOSIS—THE SOUTH AFRICAN WAR—BOER RATIONS—DO THE BOERS INTENTIONALLY FIRE ON HOSPITALS?—DIFFICULTY OF DISTINGUISHING THE RED CROSS FLAGS—NECESSITY FOR MORE OBVIOUS ARRANGEMENTS—THE PREVENTION OF LEAD-POISONING AMONG POTTERS—OUTBREAK OF LEAD-POISONING AMONG SHOEMAKERS—PROFESSOR VICTOR HORSLEY'S ATTACK ON MODERATE DRINKING.

The action brought by Mr. Charles Adams,

one of the leaders of the antivivisection campaign and editor of the *Verulam Review*, against the British Medical Association shows the straits to which the antivivisectionists are reduced for want of arguments. It seems that Mr. Adams, having read the Home Secretary's statement in Parliament that no experiments were performed on cats or dogs without anesthetics, addressed a letter to him as to 190 experiments returned in the inspectors' reports as having been performed under certificates permitting experiments without anesthetics. The Home Secretary replied that Mr. Adams was in error in thinking that the experiments were performed without anesthetics. Mr. Adams, having then an apparent contradiction, wrote to the gentlemen who carried on the experiments asking them to explain. He charged them with having performed experiments under anesthetics while they had obtained certificates on the express ground that the experiments could only be performed without anesthetics. He added that the statement of the Home Secretary appeared to cast a serious slur either upon their good faith or their professional competence, and that silence would be taken as assent. The judge said of this effusion: "A more impertinent letter was never written from one man to another." The *British Medical Journal* characterized the letter as inaccurate, misleading, and threatening, for the certificate referred to provided that the animal should be under an anesthetic "during the whole of the initial operation." "The irresponsible editor" of the *Verulam Review* was said to be either ignorant of the terms of the license or too careless to ascertain them while impugning the good faith of those who advanced the healing art by experimental methods. Hence the action which resulted in a verdict for the defendants—the only possible one.

At the Polyclinic Dr. Ord showed a very rare case of exophthalmic goiter in which the proptosis was unilateral. The patient was a woman who said that enlargement of the thyroid gland began after marriage. The projection was greater on the right than on the left side and the ordinary symptoms, tremor, palpitation and rapid pulse, were present. There was marked proptosis of the right eye, none of the left. Although Dr. Ord has seen a great deal of the disease he never previously has observed a case with unilateral proptosis.

The South African war is still the dominant topic in professional as well as lay circles. According to a daily paper the details of the Boer commissariat are as follows: The ordinary rations consist of a pound and a half of fresh meat daily, a pound and a half of coffee, three pounds of sugar and five pounds of flour weekly. Statements of savage disregard for the rules of the Geneva Convention by the Boers constantly appear in the press, and are accepted by most people. It seems to be forgotten that only one side of the question is heard and that with very few exceptions the attitude of the newspapers is far from impartial. A charge of firing on hos-

pitals has often been made. A letter from Sir William Thomson, Surgeon-in-Chief of the Irish Hospital Field Force, which has just been published, throws a good deal of doubt on this assertion. Since he has been in the field he has come to understand how a hospital may be shelled by an enemy in ignorance of what it really is. The red cross flags not uncommonly lie motionless along the flagstaff in folds and can be identified only at short distances. Although he knew where to look for them, in calm weather they were indistinguishable at 200 yards. On the wagons the red cross is much too small. The enemy only sees groups of tents precisely like those used by the fighting men. He suggests that every marquee and bell-tent used for hospital purposes should have a very large red cross on the roof and sides, repeated on various aspects, and made as obvious as possible. In every case there ought to be a light canvas in a wire frame bearing a large red cross which could be hoisted when the flag is useless.

Professor Thorpe, Principal of the Government Laboratory, has delivered at the Royal Institution an important lecture on lead-poisoning. He pointed out that the evil is largely connected with the use of raw lead, white or red, employed as an ingredient of the glazing material, or in the composition of the pigments used in decorating ware. The comparative immunity on the Continent is largely dependent on the more general use of fritted lead. However, even with this form poisoning is not unknown. He has studied the conditions under which a frit yields its lead to dilute acids comparable to the gastric juice. It is mainly through the agency of the gastric juice that lead is toxic. He has found that the ease with which lead can be given up to solvents is largely dependent upon the ratio between the basic and acid constituents of the material. Provided that the sum of the basic oxides is not more than double that of the silica, the frit as regards lead has no greater solubility than about 2 per cent. He further discovered that by treating the frit in the process of grinding with weak hydrochloric acid practically all the lead which would otherwise be soluble could be removed, leaving the residue with substantially the same composition as before. Thus a frit containing upward of 53 per cent. of oxide of lead, giving 2 per cent. of soluble lead, has its solubility diminished to 0.4 per cent. These facts have induced the Home Secretary to call upon the manufacturers to discontinue the use of raw lead and to substitute for it fritted lead of a standard limit of solubility.

Lead-poisoning has occurred at Northampton from a somewhat unusual cause. It was noticed that a number of shoe-finishers came upon the union ill and that the doctor's certificates specified lead-poisoning as the cause. On investigation the evil was apparently traced to powders, known as Chinese red and yellow chrome, used in finishing the bottoms. On being applied to the soles of the boots the powders rise and are inhaled by the operatives.

Professor Victor Horsley has delivered at St. James' Hall a most uncompromising attack on moderate drinking, claiming that our present scientific knowledge is opposed to it. His experiments with Professor Krepelin's instrument showed that after a small dose of alcohol there was a slight shortening of the time of "simple reaction," as if the brain acted more quickly. But speedily slowing of the action of the brain began, which increased as long as the alcohol remained in the body. In the case of "complex reactions" (in which thinking was required) the action was never quickened; slowing began from the first. A further interesting fact had been demonstrated: After a small dose of alcohol Professor Krepelin's personal impression was that his brain worked more easily; but when he measured its actions by his instrument he found that the brain was working in an inferior manner. The influence of alcohol was therefore deceptive.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

TWENTY-NINTH CONGRESS OF THE ASSOCIATION OF GERMAN SURGEONS—THE OPERATIVE TREATMENT OF RENAL AND URETERAL CALCULI—PYELOTOMY VERSUS NEPHROTOMY—RADIOSCOPY AND EXPLORATORY INCISION IN DIAGNOSIS—DIAGNOSIS OF FUNCTIONAL ACTIVITY BEFORE OPERATION—SITE AND EFFECTS OF NEPHROTOMY INCISION UPON THE ORGAN—CASE OF CONGENITAL HYDRONEPHROSIS WITH DISPLACEMENT AND ITS TREATMENT.

ISRAEL said that the difficulty and uncertainty of diagnosis and the dangers of the operative interference often hindered surgeons from proceeding. These factors should not be given undue weight because so many renal and ureteral conditions are amenable to surgical management and so closely simulate each other in their early stages as to make free exploration justifiable. In this manner are often discovered tubercular foci, small abscesses, incipient tumors, and various perinephritic processes. Even when visibly the kidney may appear normal, incision of it often gave good results and could be regarded as usually warrantable. Anuria due to the calculi constitutes the greatest indication for operation, no matter whether it depended on bilateral ureteral occlusion, or unilateral stoppage with reflex inhibition on the opposite side or with absence or deficiency of function due to previous or other disease of this (opposite) side. Spontaneous passage of the stone may be awaited as long as true renal colic persists, but in its absence the calculus must be promptly removed, because the patients become rapidly and severely uremic and the kidney degenerates so soon as to render its subsequent function doubtful if relief be delayed. The advent of symptoms of suppuration whether the stone be in the kidney, the pelvis or the course of the ureter, is another absolute necessity for

prompt action, because not only of the systemic effect of the infection, but also of its damage to the normal opposite kidney in the elimination of toxins. If the calculus be within the kidney-substance the divided organ should be temporarily drained. When the stone causes retention from time to time, endangering the organ by pressure, so soon as renal enlargement is made out, operate. Mere hemorrhages are the least indication for invasion of the organ for stone but are a sign for it in tubercular and other dangerous conditions. The dangers of the operation are slight in comparison with those of the condition left to its course, anuria, pyonephrosis, septic pyonephritis, etc. The mortality is only about 2-4 per cent.

The slow onset of signs of local infection, in order to protect the system and the kidneys from the danger of an extension of this process, is also a reason for treatment. Again, the depreciation of the patient from very frequently recurrent or chronic renal colic, with the possibility of sudden purulent invasion, also justifies operation. Finally, a stone in the ureter, with or without occlusion, palpable by the rectum, is a grave indication, because it always ends in a purulent condition. The danger of recurrence is not a contraindication, because dietetic and medicinal means may prevent it. A second operation for it is no more dangerous than the first. The passage of small non-faceted stones from time to time with intervals of perfect good health indicate internal medical treatment only.

Nephrotomy by its exposure of the entire anatomy is much more efficient than pyelotomy for the removal of the stones, which may be so hidden as to escape detection through a small incision of the pelvis. The small loss of secreting substance involved in the former may be neglected and suture of the renal parenchyma is simpler and surer than that of the pelvis. The technic is free shelling of the organ out of its fatty capsule, without damage to its capsule proper, down to the pedicle isolation of the ureter from the vessels; and temporary ligation of the vessels with a rubber-tube. The renal incision is lengthwise a little (2-3 mm.) toward the ventral aspect, thereby best avoiding the course of the vessels. Ureteral exploration with a sound is absolutely necessary.

Primary suture of the kidney is applicable to clean and occasionally to slightly infected cases when the urine is acid and the retention has been decreasing or is slight. Alkaline and purulent urine and marked or excessive retention, and a parenchyma studded with minute purulent foci demand free drainage. Such an organ sutured might go on to rapid general necrosis, and efficient drainage cannot be obtained through an opening in the renal pelvis. In grave cases of this condition it is best to divide the kidney into halves, sew each to a margin of the wound, drain freely, and give local treatment till the urine becomes nearly normal.

Primary nephrectomy for a first attack of calculi is not to be considered. It may be necessary

for accidental otherwise irremediable injury to the pedicle, for persistent bleeding, as a secondary step, when reopening and tamponnade have failed. Tension on the capsule proper may here aid; hence the great motive for not damaging this when the organ is enucleated from its fatty bed.

Ureteral calculi can not be safely and positively diagnosed by sounds, as these may be arrested by other obstructions. The normal approach is after exposure of the kidney from above. Movable stones are coaxed into the renal pelvis, fixed stones are removed by longitudinal incision over them, closed by Lembert sutures which must be protected by a self-retaining catheter or drainage of the urine through the upper wound. Calculi in the cavity of the true pelvis can be reached by the vagina or abdominal wall from just above Poupart's ligament, with the great disadvantage of a small field for the later treatment of the ureter. Whether the ureteral occlusion should be at once removed depends on its accessibility and the general condition of the patient. Often it is best to fulfil only the vital indication, relieving the pressure on the organ and the onset of uremia. At a second sitting the ureter can be thoroughly investigated. Great care must be exercised not to be content with removing the first palpable and perhaps movable stone, because it may not be the true offender, whether we are dealing with the exposed ureter or seeking to determine which side in bilateral trouble was primarily affected. The decision on this last point is exceedingly difficult for occlusion occasionally begins without colic; the pain may be definitely referred to the opposite side; the thickness of the abdominal walls and the onset of tympanites may cloud the physical signs; a palpable tumor may be an old hydronephrosis without symptoms, whereas the invasion of the opposite side without a tumor may be the condition; focal tenderness and reflex muscular rigidity are the best single signs but fail often. The same uncertainties apply to cases of ureteral stone within reach from the vagina and rectum. Above all the operation must first expose the kidney, not the ureter alone for a stone in it, because only in this way can a destroyed or reflexly inhibited kidney, as well as occlusion of the channels, be fully known. If the wrong side has been approached, a day's delay before attacking the diseased side is necessary, unless uremia be present even in slight degree.

CZERNY (Heidelberg) said he has given up pyelotomy in favor of nephrotomy because the former leads to fistulae too frequently. Twice he had found calculi at the distal end of the ureter, one came away spontaneously, the other required cystotomy. One of his patients died of uremia after removal of a stone from the left side. The autopsy showed occlusion and multiple calculi on the right.

KRÖNLEIN (Zurich) uses the radioscope and exploratory incision of the abdomen for diagnosis.

KOLACZEK (Breslau) reported a case of stone at the beginning of the ureter complicated by an extra-uterine pregnancy which was operated on at a second sitting.

ZONDECK (Berlin) pointed out that the renal substance should be cut $\frac{1}{2}$ - $\frac{3}{4}$ cm. dorsally because the pelvis is behind the vessels and is, hence, more freely opened.

KUMMELL (Hamburg) read a paper on the diagnosis of the functional activity of the kidneys before operative interference. Catheterization of the ureters has usually succeeded, without any instance of infection in his hands, but its significance is often difficult to determine. From one patient he obtained tuberculous urine from one and purulent from the other kidney. The former was removed and the latter finally recovered. The determination of the total urea is necessary. Alike from both and from each kidney individually. A comparison of the freezing points with those normal for the blood, the urine and the other body-fluids, often aids as variations in urea-excretion affect them to a marked extent.

BARTH (Danzig) reported a case of gangrene of the kidney and another of embolism of the lung in a paper on the diagnostic incision of the kidney. ISRAEL was of the opinion that gangrene usually is due to unduly firm suture of the capsule.

REISINGER (Mainz), speaking of the treatment of hydro-nephrosis, reported a case of congenital condition in which the kidney was situated at the promontory of the sacrum with its lower pole 3 cm. away from the bladder. After draining the collection of fluid away an anastomosis was made between the bladder and the thinned-out kidney by an inner continuous row of sutures, including the thickness of the kidney and bladder, and by an outer similar line taking in the peritoneum only. Complete recovery and good function of the kidney resulted.

SOCIETY PROCEEDINGS.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Seventeenth Annual Meeting, Held at Washington, May 1, 2, and 3, 1900.

The President's Address.—Dr. Abraham Jacobi of New York called the meeting to order and delivered the introductory address. The subject was "Cardiac Murmurs, Functional and Organic, in Infancy and Childhood." (See MEDICAL NEWS, p. 729.)

The Modern Physician's Duty to His Tuberculous Patients.—A paper on this subject by Dr. Frederick I. Knight of Boston was read by title. The following points are emphasized: (1) To make a positive diagnosis as early as possible. (2) To inform the patient of the gravity of the situation; not that he is consumptive, but that he is tuberculous and liable to become consumptive; but also that he has a good chance to recover if he pursues the right course. (3) To put the

patient at once on the best road available in his particular case for an effort at recovery. This must vary immensely according to the nature of the case, the character of the patient, his family and other relations, and his financial condition. The physician should make up his mind, if possible, exactly what course to advise without discussing pros and cons of different propositions with the patient, but possibly consulting other members of the family. This involves the study of the whole question of residence at home or abroad, in a sanatorium or out of it, partial or total relinquishment of business, etc. (4) To provide that the patient shall be all the time under the care of a medical man familiar with the modern treatment of such cases.

The Construction and Management of Small Cottage Sanatoria for Consumptives.—Dr. Arnold C. Klebs of Chicago advocated concerted action of a national character with an underlying, carefully-studied plan to bring about lasting results. He described the work of the Pennsylvania Society for the Prevention of Tuberculosis and the Society recently organized for this purpose in Chicago, and referred to various sanatoria in the United States and abroad. Dr. Klebs insisted that, in addition to the usual regimen, institutions should provide an adequate occupation, *e. g.*, games, entertainments, lectures, etc., to relieve the monotony of the life in such institutions, and should not fail to provide some kind of work that may be useful to the patient after his discharge. Gardening, carpentering, and work in a manual training-school were suggested. Great stress was laid on the importance of an abundant pure air supply. The distinct advantage of certain climates, especially those of high altitude and southern latitude, over others nearer to the chief centers of population has often been claimed but never been conclusively demonstrated. The demonstration that equally good results are possible from the treatment at home, or near home, is to be received as a great blessing. Sunshine, rain and wind are the great natural purifiers of the atmosphere. It is easier to secure good, wholesome food near the cities. Dr. Klebs showed plans of several Continental sanatoria and also original plans prepared with the assistance of Mr. J. Gamble Rogers, architect, of Chicago, which were considered to be an improvement on those heretofore employed. The capacity is for 25 patients. The plan embraces three cottages, joined by two galleries. Dr. Klebs has been able to keep patients out-of-doors through the winter in Chicago where the season is not renowned for its mildness. Dr. Klebs is a believer in the use of water as an adjunct to treatment.

The antituberculosis movement which is now sweeping over the civilized world, led by crowned heads and supported by distinguished men, to be of lasting benefit must have a more substantial basis than the mere education of the public through written or spoken advice. The appeal for the erection of sanatoria should not be put at

the end of the program. Tuberculosis will never be stamped out by indirect measures alone. Improvements in public hygiene and the spreading out of the population of cities to rural districts by means of improved transportation will be a great aid in its limitation.

Dr. Stubbert of Liberty, N. Y., spoke strongly in favor of the cottage plan of hospital construction for the tuberculous and said that these patients do not like to be thrown too closely together. He does not employ exercise very much in the treatment, but had been on the watch for agreeable diversions out-of-doors. Amateur theatricals had been tried with success. The patients rehearsed out-of-doors and their minds were pleasantly occupied and diverted from their ailments.

Dr. R. C. Newton of Montclair advocated the plan of moving about, tramping, and especially the undertaking of a driving-tour as practised by the late Dr. Henry I. Bowditch.

The Degenerative Results of Deficient Ventilation.—This paper was read by Charles Denison, M.D., of Denver. After a general description of man's needs of air and the sources of impurity that he encounters, Dr. Denison claimed that there was something more needed to secure perfect ventilation which he termed "the life of the air;" that there is a vitalizing principle whose force is annulled by the imprisonment of the air by defective ventilation. This life of the air exists chiefly in its motion, which, with light, heat and electrical power, comes from the sun. Dr. Denison instanced the air of the Mammoth Cave in Kentucky as the deadest air he ever breathed, and he quoted largely from Dr. Angus Smith's work on "Air and Rain" in which are detailed investigations on similar lines.

Dr. Denison believes that tuberculosis has come here to stay and that it springs from, or is the outgrowth of, some unified cause which will account for its existence in cattle, horses, birds, and man. Legislation is needed to limit the minimum ventilation allowable in every place of assembly and for dairy-cows, horses, etc. The minimum of space for a living apartment should be 1500 cu. ft. per individual and a minimum ventilation, or change of air, of 2000 feet per hour per person. A course for the study of ventilation should be made a prominent feature in all advanced schools and colleges and the Government should carry out the many investigations which will help to determine both the best means and the proper and necessary limits of ventilation. This is one of the ways in which a National bureau or board of health could prove itself most useful. Dr. Denison urged the maintenance of a commission on ventilation of houses, public schools, factories and mines.

Dr. R. J. Curtin of Philadelphia suggested that the climate of Denver is changing and that the air is not so dry as formerly. The sprinkling of streets and the planting of trees and subsequent irrigation and increase of running water no doubt effect the quality of the air.

Dr. Denison, who had seen the population of Denver grow from 16,000 in 1873 to 170,000 in 1900, stated that he had nine or ten cases of tuberculous meningitis, a much larger proportion of cases of this affection than he would be likely to meet elsewhere.

Dr. James A. Hart of Colorado Springs could call to mind only one case of undoubted indigenous tuberculosis.

Some Phases of the Tuberculosis Problem in Colorado.—Dr. S. G. Bonney said that there has developed an increasing popular prejudice against the ordinary association with the consumptive and a beginning sentiment against the further importation of individuals afflicted with the disease, amounting to a somewhat ill-proportioned and ignorant crusade. There result embarrassing difficulties in the way of securing adequate accommodations for the consumptive, with much unnecessary humiliation, with lack of moral encouragement, to those entitled to every sympathetic consideration.

Dr. Bonney is in hearty sympathy with the health authorities and has contempt for the indifference of those who refuse to coöperate in the rigid enforcement of regulations tending to the restriction of the disease; but he is not in sympathy with an agitation not warranted by the facts and tending to create alarm. He is unable to accept the evidence presented to substantiate the alleged increase of consumption contracted in Colorado, as the data are altogether too meager to warrant such conclusions. The fact is that the actual number of cases originating in Colorado is not increasing in proportion to the population. In 1893 these numbered 49; in 1894, 51; in 1896 but two more than in 1895 and but 17 more than in 1893, in spite of an increase in that time of 26,000 in population; in 1899, despite an increase of 50,000 in population since 1893, the number of cases is but four more than in 1893 or .30 per cent. in 1899 compared with .36 per cent. of total population in 1893. Dr. Bonney believes that a factor of no inconsiderable importance is the strong inherited susceptibility of a portion of the younger population in Colorado. During the past seven years of all the cases reported to have died from tuberculosis contracted in Colorado nearly one-fourth were in children under four or five years of age, 85 per cent. of whom died of tuberculous meningitis. Dr. Bonney believes that the first requisite should be compulsory notification and a properly-conducted registration of all cases of tuberculosis. This not to imply isolation, personal humiliation or interference with social or business pursuits; quarantine for such a disease is neither desirable nor practicable in the interest of either the consumptive or the general community. The question of legislative interference with marriage and other matters involving the liberty of the consumptive and disturbing his relation to his family and society should receive no mention in official public communications as being at present both impracticable and unwarranted. It is more properly within the

province of the physician in his advisory capacity to expect such an influence as may be justified by individual circumstances.

Stomach Conditions in Early Tuberculosis.—Dr. Boardman Reed of Philadelphia said that in the incipient stage of tuberculosis flatulent dyspepsia with eructations and pyrosis, or heartburn, with or without gastric pain or nausea, are common symptoms. They may be due to lowered nerve tone or may be evidences of actual gastric involvement. Hyperchlorhydria and acid gastric catarrh are quite as compatible with a tuberculous infection as are the asthenic types of gastric disease. Clinical experience shows that in early tuberculosis there is present very frequently a condition of the peptic glands which contraindicates the administration of any considerable doses, by the stomach at least, of highly-stimulating remedies, such as carboic acid, creosote and its derivatives, the mineral acids and most of the familiar stomachics. Dr. Reed cited a case which illustrated this and which also showed how tuberculosis for a long time may masquerade in the guise of a stomach-trouble. As to creosote different opinions of its usefulness are held by clinicians of equal ability. Whether the remedy does good or harm depends mainly on the condition of the stomach. Recent experiments prove that the oils markedly lessen the secretion of hydrochloric acid in the stomach. In the cases, therefore, in which the gastric functions are almost always depressed, as in the later stages of phthisis, cod-liver oil or much fat of any kind impairs digestion and injures the patient; whereas in cases of hyperchlorhydria, which are so often found in the earlier stages, the same remedy exerts a double influence for good, since here it tends to correct the injurious hypersecretion at the same time that it helps to fatten and strengthen the patient. In intermediate cases a moderate amount of oil may prove helpful for a time. An occasional analysis of the stomach contents may guide as to its further use. In doubtful cases, in which analysis of the stomach contents is not practicable, as well as in cases in which the gastric juice has been found to be about normal, Dr. Reed approves of combining creosote or one of its congeners with cod-liver oil so as to have the stimulating properties of the former neutralize the depressing influences of the latter upon the peptic gland. Another point made was that the muscular walls of the stomach lose their tone and there results a tardy evacuation of the contents with consequent stagnation and fermentation. This weakened motility must be overcome before tuberculous patients can get well. Instead of drugs, breathing exercises, especially in the open air, as hill-climbing, bicycling and rowing, are highly curative in conjunction with a diet which is at once digestible, nourishing and not too bulky. Massage of the abdomen can also do great good, except when the gastric glands are irritable and inclined to overaction. Intra-gastric faradism was advised.

Value of Tuberculin Test in Diagnosis of Pulmonary Tuberculosis.—Dr. J. M. Anders of Philadelphia read this paper. He said the extreme desirability of clearing the nature of latent forms and dubious cases by precise methods prior to the appearance of obvious signs and symptoms or the finding of the specific organism of the disease is universally conceded. Tuberculin holds a place with the Röntgen rays in diagnosing pulmonary tuberculosis in its incipency. Dr. Anders cited three cases in which the test was of great value. In the first, a lad of fourteen years, who had always been in delicate health, there was a history of four weeks of symptoms that were distinctly typhoidal in character and later a positive Widal reaction was obtained. At the first visit a physical examination revealed only a phthisical thorax. After the fever had declined an injection of 2 mg. of tuberculin gave a positive reaction. An X-ray photograph was then taken and showed slight, though decisive haziness. In the second case the diagnosis was made by tuberculin and at the necropsy six weeks later miliary tuberculosis following Pott's disease with beginning psoas abscess was found. In the third case, which occurred in a young man, aged nineteen years, fluoroscopic examination of the thorax and repeated examination of the sputum gave a negative result. Injection of 1 mg. of tuberculin responded positively. This patient's sputum afterward showed tubercle bacilli. The author believes that the reported failure of dubious cases to react may be due to error of administration. In his own experience a few failures would have resulted had he not increased the dose beyond the usual maximum. It is a well-established fact that a small percentage of cases of undoubted tuberculosis, especially advanced forms, have been found to be non-reactive. There are doubtless varying degrees of individual susceptibility to the action of tuberculin and it is likewise well known that cases of bone- and joint-tuberculosis require larger quantities than other forms of the complaint. Again, when reaction occurs in apparently healthy individuals, it has been pointed out by Trudeau that we should not forget that autopsies made on persons dying of other diseases show unsuspected foci to exist in from 30 to 40 per cent. of those examined. An imperfect reaction is also obtainable in certain cases of sarcoma, carcinoma and syphilis. Dr. Anders exhibited tables carefully prepared to show the practical utility of the test. Doubtful and undoubted cases were carefully separated. The percentage of reactions in patients known to be tuberculous was 78.36 per cent., while 71.89 per cent. of the suspicious cases also reacted. The more recent and extensive clinical tests in widely-separated parts of the world by competent observers have resulted in a practically unanimous verdict which emphasizes its superior value as an aid to diagnosis of incipient cases and in no small degree its apparent harmlessness. Dr. Anders has never noted personally or in recorded cases any bad effects, except in one case of Addison's dis-

case cited by Head, in which a fatal termination occurred thirty-six hours after the injection of 24 mg. of tuberculin.

Dr. Quimby of New York advocated the use of tuberculin for diagnostic purposes and stated his belief that the unfavorable opinion formed from its use when first announced was due to the larger dose employed, *viz.*, 10 mg.

Dr. Denison inquired what should be designated as a characteristic reaction.

Dr. A. C. Klebs said that different tuberculins gave different reactions and that there should be a standard tuberculin in order to get definite and comparable results.

Dr. J. W. Brannan of New York had used tuberculin at the Hospital for Ruptured and Crippled in tuberculosis of joints and in arthritis of the joints and had found the test valuable.

Dr. E. R. Baldwin of Saranac said that 2 mg. in a joint case is a rather small dose; that it requires a larger dose in tuberculosis of joints than in pulmonary cases.

Stamina.—Dr. A. M. Bell of Brooklyn read a paper entitled "Stamina: With Special Reference to the consumption of Fat Food for Its Maintenance as a Preventive of Tuberculosis." Dr. Bell stated it as an axiom that the power of resisting the ordinary exciting causes of illness, including pathogenic microbes, depends upon one's state of health. Feebleness predisposes to disease. As to abstemiousness, one may overeat and yet abstain from some essential food necessary for the maintenance of health. Dr. Bell claimed that, other conditions being equal, tuberculous diseases are prevalent inversely to the use of fat of some kind as an article of diet. Inability to digest fat food is one of the features of the pre-tubercular stage. Tuberculous patients are liable to a dyspepsia due to the too exclusive use of farinaceous food. Dr. Bell advised the fuller use of butter and bacon. Fat is the chief article of diet in the Arctic regions. The Esquimaux who live on "toodnoo," a kind of butter made from the separated fat of reindeer, are nearly exempt from tuberculosis. Furthermore their resistance to fatigue and general muscular power is very great. Dr. Bell attributes the increase of tuberculosis among the American Indians to the gradual increase of farinaceous food as an article of their diet. The Gauchos of the South American pampas and the flesh-eating Mahometans of India were instanced as examples of powerful development by reason of their liberal diet of animal food. Dr. Bell claimed that meat should contain the natural blood of the animal and should not be allowed to drain away in slaughtering, as is sometimes practised.

During Dr. Bell's professional career, extending over a period of nearly sixty years, he has rarely known a family or an individual that was brought up on a liberal supply of butter and bacon to become tuberculous. The "hog and hominy" of the negro dietary in the days of slavery was a safeguard against tuberculosis, but their

food has changed and consumption is ripe among them. Pork and bacon is not now a favorite or common dish among them. Everybody has learned that cod-liver oil is good for consumptives, but few seem to have learned that food of the same character, suitable for the table, is preventive of consumption.

Aneurism of the Heart with Thrombosis of the Left Coronary Artery.—Dr. Judson Daland of Philadelphia cited the case of a man, aged fifty-four years, who contracted syphilis twenty-seven years before death and one of whose children now shows signs of having inherited this disease. Two years before death an ulcer appeared upon the side of his tongue, extending from the top to the base, which yielded to specific treatment. He was a chronic alcoholic for thirty years. While in apparent good health he suddenly became unconscious, with marked cyanosis and coldness of the extremities, loss of radial pulse, indistinguishable heart-sounds, shallow respiration, contracted and non-responsive pupils, frequent desire to urinate, and great thirst. Death resulted in twenty hours. The autopsy showed dilated hypertrophy of the left ventricle, partial dilatation of the apex region of the left heart, the size of an English walnut, a large area of fibroid degeneration, especially involving the interventricular septum; recent and old thrombi; localized and firmly adherent pericarditis; almost complete occlusion of the orifice of the right corner of the artery; extreme deforming endarteritis of both coronary arteries almost completely obstructing the right coronary and thrombosis of the left coronary artery.

Dampness of Soil as a Factor in the Production of Human Tuberculosis.—This was the title of a paper read by Richard Cole Newton, M.D., of Montclair, N. J. The author gave the histories of four families which came under his personal care in all of which there was no family history of phthisis; they represented American (1), German (1), and Irish (2); there were from two to ten cases of tuberculosis in each of these families. In all instances the houses were very damp and generally unhygienic. Dr. Newton believes that something besides direct contagion by the reception of the tubercle bacilli is necessary to establish the morbid process which is known as phthisis pulmonalis. He cited Squire and Kanthack who note the behavior of certain animals, such as guinea-pigs and white mice, which are ordinarily resistant to avian tuberculosis but can easily be infected after being kept for a time in a warm chamber at 33°-35° C. The struggle is, therefore, to be for sanitation rather than disinfection and isolation, against the surroundings of a people rather than against a microbe which can grow only when a predisposition is set up. The results of sanitarium treatment have been practically identical so that while a life in Colorado is desirable, it is not necessary in order to save at least a third of our incipient cases of phthisis. While sunlight and life in the open air, pure

milk and a wholesome occupation are necessary, a dry, properly-constructed cellar is just as essential to the alteration of the predisposition, so that the bacillus of Koch cannot gain a foothold in the human organism, as any of the means named. They should live away from swamps, cesspools, sluggish streams and all stagnant and unwholesome bodies of water. The question resolves itself into one largely of drainage.

Dr. Leonard Weber of New York referred to the insanitary condition of the tenement-house districts of New York. These must be gotten rid of if the disease is to be controlled. Dampness lowers the vital resistance but does not necessarily increase the susceptibility to infection.

Dr. N. S. Davis, Jr., of Chicago spoke of the unfavorable influence of bad ventilation not only of rooms but of the human lungs. Dr. C. L. Minor of Asheville said that while tuberculo-phobia has its utility it has grown excessively without a corresponding product of prophylactic measures. He referred to the negro huts of the South and the fact that the negro washerwomen sometimes become infected by washing the clothing of the sick people who frequent the resorts. The better classes of the population are also careless. As a rule the public are under-aerated. They should not be alarmed unless in a practical way. Physicians should look after their patients in this respect while they are well as well as when they are ill.

Dr. E. R. Baldwin of Saranac Lake said that the reason why damp houses favored the propagation of tuberculosis was because of the general law that moisture keeps the tubercle bacillus alive, while dryness kills it.

Dr. Daland of Philadelphia who had visited Iceland, referred to the recent spread of tuberculosis through the island which previously had been largely exempt. The bacilli were introduced from Norway and their propagation was favored by the dampness, the fogs and winds and the absence of light for long periods.

Subsequent History of Patients Apparently Cured by Antitubercle Serum.—A paper on this subject was read by Dr. J. Edward Stubbert. This was a further report on patients whose history was given two years ago. None of these cases have relapsed and marked improvement has resulted in 78 per cent. of the cases. Details of the cases were given in full.

The Phlebitis of Advanced Phthisis.—This paper was read by Dr. R. G. Curtin of Philadelphia. Several cases were reported which apparently showed the traumatic origin of tubercular disease. Blows and falls are not unusual causes and prize-fighters are liable to the disease.

Dr. R. C. Newton of Montclair questioned whether the proportion of cases of pure tuberculosis was large in the latter class. They were men frequently of very intemperate habits and liable to syphilis.

Dr. Babcock of Chicago, Dr. Coleman of Augusta and Dr. J. M. Anders of Philadelphia reported cases of phlebitis in phthisis.

Dr. Norman Bridge of Los Angeles cited the case of a man, twenty-six years of age, who had had tuberculosis of the left lung for two or three years and then developed an ideal phlebitis of the right groin extending downward, with pain, fever, swelling, and tenderness. A similar condition set in upon the opposite side and pursued an identical course.

Intrapleural Injection of Nitrogen Gas in Tuberculosis.—Dr. H. P. Loomis of New York read a paper on this subject. He has found nitrogen gas free from all objections, and almost non-absorbable after a lapse of from three to six months. All the general symptoms improve after its use, the expectoration is lessened, the appetite improves, weight increases and hemorrhage is invariably stopped. It does not cure but arrests the progress of the disease. That pressure on the affected lung is of advantage may be inferred from the fact that in cases of advanced tuberculosis with fluid in the pleural cavity, if removed by tapping, death often quickly follows. Three-fourths of the cases of primary pleurisy are tubercular. Dr. Loomis has never seen any bad results in any case treated by injection of nitrogen gas. One hundred to two hundred cubic inches may be used. If introduced into the left pleural cavity the heart is displaced beyond the median line. The respiration-rate is increased and the pulse-rate lowered. In one case he observed subcutaneous emphysema and the patient became excited and talkative.

Dr. H. L. Taylor of St. Paul reported an unfavorable experience in over a dozen cases and only temporary improvement in one case and he found that in no case did the splinting of the lung amount to anything at the end of two months.

Dr. R. H. Babcock of Chicago supported Dr. Loomis and reported that in the majority of cases treated in Chicago the results were satisfactory, improvement following in a majority of cases. He reported a case in which the symptoms were arrested after injections at intervals of four or five weeks for a year and the patient in the meantime was under the most unfavorable domestic surroundings.

Dr. Charles Denison of Denver referred to his method of strapping the chest with plasters on the affected side. These were held in place by being carried to a collar on the opposite shoulder. He corroborated the power of these measures to stop hemorrhage and lessen the size of a cavity.

Dr. J. Edward Stubbert has used nitrogen gas in hemorrhagic cases with success. The lung must be absolutely compressed or failure will result.

The Hydratic Treatment of Tuberculosis.—Dr. J. H. Kellogg of Battle Creek read this paper. It will appear in a future issue of the MEDICAL NEWS.

Splenic-Myelogenous Leucemia with Pulmonary Tuberculosis.—This was the title of a paper by Henry L. Elsner, M.D., and William A. Groat, B.S., of Syracuse, New York. The combina-

tion of pulmonary tuberculosis and leucemia is exceedingly rare; in the terminal stages of pseudoleucemia far-reaching tuberculous changes in the various organs of the body are frequently found. The case reported by Dr. Elsner was in an Irishman, a baker, aged forty years, with a distinct alcoholic history. There was malaise with increasing weakness, and a dragging sensation with pain and prominence of the abdomen. He grew pale and sallow and had night-sweats. Cough set in and he developed pleurisy without effusion. Tubercle bacilli were found in the sputum after February 20, 1900. The abdominal symptoms were due to an enormous spleen and an enlarged liver. The posterior upper portion of the left lung was consolidated. In the upper half of the interscapular region on the right side there was cavernous breathing. In the anterior surface of the posterior laryngeal wall there was deep tuberculous ulceration. The blood-counts between January 25th and April 16th, 1900, showed from 3,320,000 to 2,922,000 red cells and from 320,000 to 121,500 white cells per cubic millimeter. The hemoglobin decreased from 62 to 55 per cent. (Gowers). The red cells were pale and there were numerous megaloblasts. The myelocytes ranged from 38 to 16 per cent. and brand the case as one of splenic-myelogenous leucemia. There was a gradual and steady decrease in the total number of leucocytes but an increase in the percentage of polymorphonuclear neutrophils, a decrease in the number of myelocytes and an increase in the number of lymphocytes as the tuberculous process advances. The interesting point is that with added infection of whatever nature there is likely to be a marked reduction in the number of leucocytes. Dr. Elsner summarized the cases of Quinke, Stintzing, Lichtheim and Baldwin, the only other cases on record so far as known.

A Case of Mural Endocarditis.—Harold Williams, M.D., of Boston read this paper. The case was one in which there were no murmurs in spite of extensive disease of the mitral valve. The patient, a woman, aged fifty-four years, had angina pectoris with dyspnea coming on after a short walk. She was put to bed where she remained until her death, a little less than three months later. During this period she had recurrent attacks of intense dyspnea, loss of pulse and collapse. Consciousness was retained throughout the attacks. The attacks became almost continuous but were invariably without pain, and the usual remedies quickly failed in turn to give more than transient relief. At no time were murmurs detected by any of the physicians in attendance. The autopsy showed a serous pleural effusion of the left side, a clot in a branch of the left pulmonary artery causing consolidation of the corresponding extent of lung tissue. The heart weighed nearly twice the normal amount. The mitral orifice was of normal size. The flaps showed slight diffuse thickening. The chordæ tendinæ were generally thickened and shortened in such a manner as absolutely to preclude

closure of the valve. The endocardial surface of the ventricular wall below the posterior mitral flap was thickened, white and very opaque. The left coronary artery showed nodular projections throughout its course but none showed calcification. The right coronary from its origin showed a sudden diminution in size and was transformed into a fibrous chord through which the canal could not be followed. Microscopic examination of the affected area in the wall of the left ventricle showed a proliferative endomyocarditis. The case was one of generalized arteriosclerosis, affecting vessels of medium and small size particularly.

Dr. W. S. Davis, Jr., of Chicago reported a case of malignant endocarditis which had recovered, an occurrence which he had never previously witnessed. The patient was a man, twenty-eight years of age. The onset was slow and the fever was persistent. It was of obscure origin.

Dr. J. W. Brannan of New York reported a case of absence of murmur in spite of marked lesion of the mitral valve. The patient died very suddenly and at the autopsy the mitral valve was found markedly contracted. The patient first had a systolic murmur, then a presystolic murmur, and for a month before death there was no murmur whatever.

Dr. Jacobi of New York referred to a case in which there were remnants of endocarditis, small exudations with hard circumscribed deposits and slight thickening of the edge of the valve, but absolutely no murmur could be heard. In children particularly the diagnosis is liable to be difficult. In malignant endocarditis there may be large coccus deposits but no murmur, especially when the deposits are along the insertions of the valves. When the deposits are on the edge of the valves there is a murmur.

Dr. R. C. Newton of Montclair said that in the experience of Dr. E. G. Janeway, out of twelve cases that he had seen, one had recovered and in that case the condition was due to gonorrhea.

Dr. S. A. Fisk of Denver reported on some favorable terminations of endocarditis. In one of these, a child, an endocardial murmur was the first indication of a diphtheria; recovery from the cardiac lesion is complete. In Colorado physicians do not lay such stress on its being an unfavorable symptom as they formerly did.

Dr. R. H. Babcock of Chicago stated that we know very little about the cause of murmurs. They are useful guide-posts that point out the way to correct understanding of a given case. In functional cases they are not very important and we must rely on the secondary physical signs. An aortic diastolic murmur may be absent in aortic insufficiency.

Dr. Williams, in closing, said that no bacteriological examination was made in his case.

Exercise Suitable for Children Suffering From Heart Disease.—J. Madison Taylor, M.D., of Philadelphia made a plea for regulated movements, such as massage and the so-called Swe-

dish movements. Passive movements have a value out of all proportion to the results obtained by voluntary exercise. By passive movements we improve the peripheral circulation and promote central changes of a restorative nature. Medicines fail in many cases in which passive exercises accomplish much good. Dr. Taylor cited cases in support of his position.

Dr. Abraham Jacobi, in the discussion, said that it is impossible to relieve the heart when there is no peripheral circulation. The skin contains a large part of the blood of the body distributed through the fourteen, fifteen or sixteen square feet of the adult surface. Friction does good and when the circulation in the skin is reestablished the heart is relieved. He advocated rest and cold-water treatment. Under their use the dilated and hypertrophied heart grows smaller. By rest the myocardium has a chance to improve. Dr. Jacobi employs rubbing, massage, caffeine and strychnia in such cases. Massage should be administered by physicians or by those who know the anatomy of the muscles and lymph-ducts and who know how to use their fingers where others use their hands indefinitely. The muscles are too much neglected.

The Nervous System in Pulmonary Phthisis as a Basis for Treatment.—Thomas J. Mays, M.D., Philadelphia, read this paper. The author holds that phthisis is an exhaustion of the vital forces of the body in which loss of appetite, fever, night-sweats and other well-known symptoms accompany or precede the earliest implication of the pulmonary organs; he believes that the original trouble in the great majority of cases lies in the brain and nervous system and particularly in the pneumogastric nerves. That the vagi are primarily involved in phthisis Dr. Mays has shown in rather a large collection of cases in which confirmation was made *post-mortem*. Holding these views as to the etiology and pathology of phthisis, Dr. Mays discards all the usual remedies and employs those measures which stimulate the nervous system, such as strychnine, static electricity, quinine, capsicum, etc. He also employs massage of the vagi in the neck and subcutaneous injections along their course. The dose thus used was five minims of a two-and-a-half-per-cent. solution of silver nitrate, preceded by a similar dose of a cocaine solution. The technic was described. Dr. Mays has used silver nitrate injections in about two hundred cases of phthisis during the last nineteen months. The results were gratifying, the cough and expectoration were greatly relieved or ceased altogether, dyspnea and oppression of the chest were relieved; vomiting increased in a marked degree; the general strength improved. The effect on the physical signs was equally gratifying. This was particularly true of the gain in body weight. Dr. Mays believes that if this auxiliary method is combined with other good hygienic, dietetic and medicinal treatment the practical results will be greater than without that method, and he claims that the nervous system is the principal avenue through which

pulmonary phthisis may be successfully approached from a therapeutic standpoint.

The Inadequacy of the Physical Signs as Indicating the Gravity of a Pneumonia.—Andrew H. Smith, M.D., of New York read a paper with this title. The actual degree of involvement in a case of pneumonia is not always easily determined and the autopsy frequently brings unexpected revelations. The faintness of the respiratory murmur in health and the presence of overlying fat may obscure the initial crepitus as well as the later percussion dulness. Furthermore, the area of consolidation often falls far short of the area in which the toxin is being found. This outer zone may not present notable signs but is actively engaged in the formation of toxin and in this situation their virulence is greater than is shown in the cause of cultures taken from the center of the consolidated area. Preexisting morbid conditions, such as chronic kidney-disease, cirrhosis of the liver and pulmonary tuberculosis, exert a very unfavorable influence on the progress of a pneumonia. Consequently, too much stress should not be laid on the physical signs in estimating how sick the patient really is. Once the diagnosis is established the patient ought not to be exhausted by repeated physical examinations and consultants should, as a rule, accept the result of previous physical examinations and base advice on the general symptoms and aspect of the case.

The Association elected the following officers for the ensuing year: President, Dr. R. H. Babcock, of Chicago; first vice-president, Dr. A. C. Peale, of Washington; second vice-president, Dr. S. W. Langmaid, of Boston; secretary and treasurer, Dr. Guy Hinsdale, of Philadelphia; member of Council, Dr. Abraham Jacobi, of New York.

It was decided to leave to the Council of the Association the choice of the place and date for the meeting of 1901.

THERAPEUTIC HINTS.

Cardiac Stimulant.—

1. \mathcal{B} . Liq. strychniæ (Br.)..... \mathfrak{m} ii
Ext. cocæ fl..... \mathfrak{m} xv ..
Spts. chloroformi..... \mathfrak{m} v
Aq. cinnamon q. s. ad..... \mathfrak{z} ss.
M. Sig. Dose to be administered every four hours in a child of from eight to twelve years of age.—Burney Yeo.
2. \mathcal{B} . Spts. arteris comp..... \mathfrak{m} x
Tinct. nucis vom..... \mathfrak{m} v
Tinct. lavand. comp..... \mathfrak{m} x
Aq. carni (Br.) q. s. ad..... \mathfrak{z} ss.
M. Sig. Give every four hours, or as required, to child of from eight to twelve years of age.—Burney Yeo.

The diagrams illustrate the arrangement of particles in different states of matter:

- Solid:** Particles are arranged in a regular, repeating pattern, representing a crystalline structure.
- Liquid:** Particles are arranged in a disordered, irregular pattern, representing a non-crystalline structure.
- Gas:** Particles are widely spaced and arranged in a disordered, irregular pattern, representing a non-crystalline structure.



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